

| | | | | | | |
|---|--|--|--|-----------------------------|-----------------------------|----------------|
| SOLICITATION, OFFER AND AWARD | | 1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) | | RATING DO | PAGE 1 | OF PAGES 78 |
| 2. CONTRACT NUMBER | 3. SOLICITATION NUMBER N00164-01-R-0117 | 4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP) | | 5. DATE ISSUED 10JUL2001 | 6. REQUISITION/PURCHASE NO. | |
| 7. ISSUED BY NSWC CRANE 300 HWY 361 POC 1165ZS CRANE IN 47522-5001 | | CODE N00164 | 8. ADDRESS OFFER TO (If other than Item 7) | | | |

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder"

SOLICITATION

9. **Sealed offers in original and 1 copy for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in BLDG 3291 until 2:00 PM EST local time 10 AUGUST 2001.**

CAUTION — LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

| | | | | | | |
|-----------------------------------|---------------------------|--|---------------------------------|---------------|--------------|--|
| 10. FOR INFORMATION CALL: X | A. NAME MARLENE SIDONS | | B. TELEPHONE (NO COLLECT CALLS) | | | C. E-MAIL ADDRESS SIDONS_M@CRANE.NAVY.MIL |
| | | | AREA CODE 812 | NUMBER 854 | EXT. 3856 | |

11. TABLE OF CONTENTS

| (✓) | SEC. | DESCRIPTION | PAGE(S) | (✓) | SEC. | DESCRIPTION | PAGE(S) |
|-----------------------|------|-------------------------------------|---------|--|------|---|---------|
| PART I - THE SCHEDULE | | | | PART II - CONTRACT CLAUSES | | | |
| X | A | SOLICITATION/CONTRACT FORM | 1 | X | I | CONTRACT CLAUSES | 28-52 |
| X | B | SUPPLIES OR SERVICES AND PRICE/COST | 2-5 | PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH. | | | |
| X | C | DESCRIPTION/SPECS./WORK STATEMENT | 6-16 | X | J | LIST OF ATTACHMENTS | 53 |
| X | D | PACKAGING AND MARKING | 17-19 | PART IV - REPRESENTATIONS AND INSTRUCTIONS | | | |
| X | E | INSPECTION AND ACCEPTANCE | 20-21 | X | K | REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS | 54-66 |
| X | F | DELIVERIES OR PERFORMANCE | 22-23 | X | L | INSTRS., CONDS., AND NOTICES TO OFFERORS | 67-76 |
| X | G | CONTRACT ADMINISTRATION DATA | 24-26 | X | M | EVALUATION FACTORS FOR AWARD | 76-79 |
| X | H | SPECIAL CONTRACT REQUIREMENTS | 27 | | | | |

OFFER (Must be fully completed by offeror)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

| | | | | |
|---|-----------------------|-----------------------|-----------------------|--------------------|
| 13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8) | 10 CALENDAR DAYS % | 20 CALENDAR DAYS % | 30 CALENDAR DAYS % | CALENDAR DAYS % |
| 14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated): | AMENDMENT NO. | DATE | AMENDMENT NO. | DATE |
| | | | | |
| | | | | |

| | | | | |
|--|---|----------|---|----------------|
| 15A. NAME AND ADDRESS OF OFFEROR | CODE | FACILITY | 16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print) | |
| 15B. TELEPHONE NUMBER AREA CODE NUMBER EXT. | <input type="checkbox"/> 15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. | | 17. SIGNATURE | 18. OFFER DATE |

AWARD (To be completed by Government)

| | | | |
|--|---|----------------------------------|----------------|
| 19. ACCEPTED AS TO ITEMS NUMBERED | 20. AMOUNT | 21. ACCOUNTING AND APPROPRIATION | |
| 22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: X 10 U.S.C. 2304(c) (5) <input type="checkbox"/> 41 U.S.C. 253(c) () | 23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified) | | ITEM |
| 24. ADMINISTERED BY (If other than Item 7) CODE | 25. PAYMENT WILL BE MADE BY CODE | | |
| 26. NAME OF CONTRACTING OFFICER (Type or print) | 27. UNITED STATES OF AMERICA | | 28. AWARD DATE |

IMPORTANT -- Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

SECTION "B" SUPPLIES

CLIN DESCRIPTION OF SUPPLIESQTY UNIT UNIT PRICE AMOUNT**LOT I**

0001 FIRST ARTICLE UNITS

3 EA

\$

\$

Shipboard Automatic Chemical Agent Detector
and Alarm (ACADA) systems manufactured
in accordance with (IAW) Product Specification
PS/01/8855/002, NAVSEA Drawing 53711-7344570,
Technical Manual SW073-AF-MMO
-010/MK 27 MOD 0, and Statement of Work (SOW) found
in SECTION "C" herein.

0002 Shipboard ACADA Systems Production Units,
same CLIN 0001 and as delineated in SOW
Paragraph 3.2.5.1 herein

CONTRACT MINIMUM QUANTITY 362 each
CONTRACT MAXIMUM QUANTITY 1,000 each

Shipboard ACADA YEAR 1 Price Each YEAR 2 Price Each YEAR 3 Price Each
Production Units, same
as CLIN 0002.

| | | | |
|--------------------------|----|----|----|
| Order Quantity 1-49 each | \$ | \$ | \$ |
| Order Quantity 50-150 | \$ | \$ | \$ |
| Order Quantity 151-300 | \$ | \$ | \$ |
| Order Quantity 301-400 | \$ | \$ | \$ |
| Order Quantity 401-600 | \$ | \$ | \$ |
| Order Quantity 601-800 | \$ | \$ | \$ |
| Order Quantity 801-1,000 | \$ | \$ | \$ |

0003 PROVISION ITEM ORDER FOR SHIP ACADA TBD TBD TBD TBD
*Quantities and Prices to be established prior to
any order for this CLIN. Estimated maximum
amount is Not to exceed \$950,000.00

0004 DATA IAW DD1423 is section "J". 1 LO NSP NSP

LOT II

0001 Shipboard Automatic Chemical Agent Detector and Alarm (ACADA) systems manufactured in accordance with (IAW) Product Specification PS/01/8855/002, NAVSEA Drawing 53711-7344570, Technical Manual SW073-AF-MMO Shipboard ACADA Systems Production Units, and as delineated in Statement of Work Paragraph 3.2.5.1 herein

CONTRACT MINIMUM QUANTITY 362 each
 CONTRACT MAXIMUM QUANTITY 1,000 each

Shipboard ACADA YEAR 1 Price Each YEAR 2 Price Each YEAR 3 Price Each
 Production Units, same
 as CLIN 0001.

| | | | |
|--------------------------|----|----|----|
| Order Quantity 1-49 each | \$ | \$ | \$ |
| Order Quantity 50-150 | \$ | \$ | \$ |
| Order Quantity 151-300 | \$ | \$ | \$ |
| Order Quantity 301-400 | \$ | \$ | \$ |
| Order Quantity 401-600 | \$ | \$ | \$ |
| Order Quantity 601-800 | \$ | \$ | \$ |
| Order Quantity 801-1,000 | \$ | | |

| | | | | | |
|------|--|-----|-----|-----|-----|
| 0002 | PROVISION ITEM ORDER FOR SHIP ACADA *Quantities and Prices to be established prior to any order for this CLIN. Estimated maximum amount is Not to exceed \$950,000.00 | TBD | TBD | TBD | TBD |
|------|--|-----|-----|-----|-----|

| | | | | |
|------|---------------------------------|------|-----|-----|
| 0003 | DATA IAW DD1423 is section "J". | 1 LO | NSP | NSP |
|------|---------------------------------|------|-----|-----|

For stair step pricing the quantity pricing is the total quantity for all orders issued on a given day. Pricing will be based on the unit price for the quantity required in the year in which the order is placed for each SUBCLIN. If cumulative price is applicable so indicate

SECTION "B" NOTES:

SECTION "K" herein will be incorporated by reference and made a material part of any resultant contract in accordance with FAR 15.406-1(b).

SECTION "C" - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

**SHIPBOARD AUTOMATIC CHEMICAL DETECTOR and ALARM (Shipboard ACADA)
MK 27 MOD 0
STATEMENT OF WORK**

1.0 SCOPE. This statement of work establishes the requirements for the manufacture, operation, test and acceptance of the Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA, MK 27 MOD 0) hereinafter referred to as Shipboard ACADA.

1.1 Background. Shipboard ACADA is a man-portable point detection system used by U.S Naval forces to detect and alarm for chemical agent vapor contamination of the air in interior and exterior spaces of the ship. It responds to nerve (G, V) and blister (H) chemical warfare agents. The most important operational feature of Shipboard ACADA is that it monitors the ship's interior ambient air in real time and detects agents at low concentrations while ignoring the presence of common Shipboard interferents. Audible and visual alarm occurs in less than 60 sec.

2.0 APPLICABLE DOCUMENTS.

2.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the latest issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

Military Specifications.

| | |
|---------------|--|
| MIL-P-116 | Preservation, Methods of. |
| MIL-S-901 | Shock Test, H.I. (High Impact); Shipboard Machinery, Equipment And Systems, Requirements for |
| MIL-E-17555 | Electronic and Electrical Equipment Accessories, and Provisioned Items (Repair Parts); Packaging of |
| MIL-STD -129 | Marking for Shipment and Storage |
| MIL-STD-167-1 | Mechanical Vibrations of Shipboard Equipment (Type I - Environmental And Type II - Internally Excited) |
| MIL-STD-461 | Requirements for the Control of Electromagnetic Interference Emission and Susceptibility |
| MIL-STD-462 | Electromagnetic Interference Characteristics, Measurement of |
| MIL-STD-882 | System Safety Program Requirements |

2.2 Other Government documents. The following Government documents form a part of this statement of work to the extent specified herein.

Drawing

NAVAL SEA SYSTEMS COMMAND (NAVSEA)
53711 – 7344570 Shipboard Automatic Chemical Agent Detector and Alarm

Production Specification

PS/01/8855/002 Shipboard Automatic Chemical Agent Detector and Alarm
Production Specification

Publication

SW073-AF-MMO-010 / MK 27 MOD 0 Shipboard Automatic Chemical Agent Detector and Alarm, Technical Manual

2.3 Non-Government publications. The following document(s) form a part of this document to the extent specified herein.

American Society for Testing and Materials (ASTM)
ASTM B 117 Standard Practice for Operating Salt Spray (Fog) Testing Apparatus

(Applications for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

International Organization for Standardization (ISO)
ISO 9001 Quality systems - Model for quality assurance in design, development, production, installation and servicing.

(Applications for copies should be addressed to International Organization for Standardization, Case Postal 56, CH-1211 Geneva 20, Switzerland.)

2.4 Software. The following software will be provided to the contractor by the contracting agency (GFI).

DRAWING

NAVAL SEA SYSTEMS COMMAND (NAVSEA)
53711-7344557 - Software Program, Eprom
SACADADSP.B3
53711-7343958 - Soft Program, Troubleshooting/Signature,
Detection Unit (PC Based)
53711-7344562 - Software Program, PAL
SACADA.JED
53711-7344558 – Software Program, Eprom
SACADADSP.B2
53711-7344559 – Software Program, Eprom
SACADCDSP.B1
53711-7344560 – Software Program, Eprom

SACADADSP.B0
53711-7344561 – Software Program Eprom
SACADAMICRO.HEX

3.0 REQUIREMENTS.

3.1 General. The work required by this contract shall be performed in accordance with the Shipboard ACADA Product Specification (PS/01/8855/002), NAVSEA Drawing 53711-7344570, Technical Manual (SW073-AF-MMO-010/MK 27 MOD 0) and this Statement of Work (SOW).

The contractor shall fabricate and test first article and production units as listed in Section “C” of this contract to meet the performance criteria specified in Product Specification PS/01/8855/002 and the detailed requirements of paragraph 3.2.1 through 3.2.9.

The contractor shall provide program management in accordance with the detailed requirements of 3.2.10 below.

3.1.1 Licensing. The contractor shall be required to deliver the Shipboard ACADA System as an exempt item. That is, an item incorporating a gas and aerosol detector, containing byproduct radioactive material, such that any person using the Shipboard ACADA System is exempt from the U.S. Nuclear Regulatory Commission's (NRC) regulatory requirements. Fabrication, initial distribution, and use of devices containing radioactive material is regulated by the NRC. The contractor/manufacturer would be expected to obtain all appropriate NRC licenses to manufacture and distribute the gas and aerosol detector. Delivery (distribution) of the gas and aerosol detector must be in accordance with the Title 10, Code of Federal Regulations Parts 30 and 32, in particular §30.20 and §32.26.

3.2 DETAIL TASKS.

3.2.1 Fabrication. The contractor shall use the furnished Technical Data Package (Top Drawing Number 53711-7344570), Product Specification (PS/01/8855/002) and the Technical Manual (SW073-AF-MMO-010 / MK 27 MOD 0) to produce the required first article test units and production units.

3.2.2 On-board Spares. The contractor shall provide one (1) lot of on-board spares for each system. Each lot shall consist of the following:

| <u>Item</u> | <u>P/N or NSN</u> | <u>Quantity</u> |
|---------------------------|----------------------|-----------------|
| Desiccant Filter Assembly | 53711-7243490 | 3 ea. |
| Purge Filters | NSN 4240-01-206-1077 | 6 ea. |
| Power Supply Assembly | 53711-7343940 | 1 ea. |
| Particulate Filters | NSN 6640-01-323-5141 | 10 ea. |
| Tefzel Tubing | .250 X .031 NAT EFTE | 5 Ft |

3.2.3 Test and Evaluation. The contractor shall conduct and evaluate the results of environmental, performance and quality conformance tests on first article and production units to demonstrate full compliance of all equipment and software with PS/01/8855/002.

3.2.3.1 Refurbishment of First Article Units . After successful completion and approval of first article testing, first article units shall be refurbished as necessary to meet all operational requirements. Any Shipboard ACADA component that has been live agent tested must be certified to be no less than “XXX” (Triple X) clean as specified in U.S. Army Regulation, AR 385-61, 3 Nov 1992. Each first article component shall have a permanent label affixed indicating “First Article Test (FAT) Equipment. Not for shipboard installation.” After refurbishment and labeling, the items shall be prepared for delivery as directed in the contract and delivered to the Contracting Activity.

3.2.4 Inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified in PS/01/8855-002. Except as otherwise specified in the contract, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, acceptable to the Government. The Government reserves the right to perform any of the inspections set forth in PS/01/8855/002 where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

3.2.4.1 Inspection Lots. Inspection lots shall be one complete ship system as described in paragraph 2 of PS/01/8855/002.

3.2.4.2 Inspection and Test Reports. The contractor shall document the results of all examinations and tests performed on the contract items and provide objective quality evidence that the required inspections and tests have complied with the requirements, specifications, and standards set forth in the contract.

3.2.4.3 First Article Inspection and Test. The first article inspection shall verify that the applicable requirements of PS/01/8855/002 have been met. The order of testing shall be in the sequence listed in Table 7.1 except for verification of operating time (see 7.3.1) and workmanship screen (see 5.6 and 7.5), which may be scheduled at the contractor’s convenience. Any Shipboard ACADA or subassembly failing any inspection or test shall be cause for rejection of the first article unit. The Shipboard ACADA shall be tested by the contractor prior to production to demonstrate the adequacy and ability of the contractor’s processes and procedures in achieving the performance that is inherent in the design.

3.2.4.4 Quality Conformance Inspection. The quality conformance inspection shall verify that all applicable characteristics of sections 3 and 5 of PS/01/8855/002 and this contract have been met. The Shipboard ACADA shall be inspected and tested in the sequence specified in Table 7.1.

3.2.5 Preparation for Delivery.

3.2.5.1 Systems. The complete Shipboard ACADA is intended for shipboard use. The complete Shipboard ACADA and accessories shall be packed in a single exterior container. Packing shall be to commercial standards, except that interior packaging of the major components shall be in accordance with MIL-E-17555, Level A. A complete Shipboard ACADA system (including spares listed in 3.2.2) and accessories consists of:

| <u>Item</u> | <u>P/N or NSN</u> | <u>Quantity</u> |
|--------------------|-------------------|-----------------|
| Detector Unit (DU) | 53711-7243432 | 1 ea. |

| | | |
|-----------------------------|----------------------|--------|
| Power Supply Assembly | 53711-7343940 | 2 ea. |
| Desiccant Filter Assembly | 53711-7243490 | 3 ea. |
| Purge Filter Assembly | 53711-7344584 | 1 ea. |
| Purge Filters | NSN 4240-01-206-1077 | 6 ea. |
| Particulate Filter Assembly | 53711-7343945 | 1 ea. |
| Particulate Filters | NSN 6640-01-323-5141 | 10 ea. |
| Rain Hood Assembly | 53711-7243490 | 1 ea. |
| Wand Assembly | 53711-7344583 | 1 ea. |
| Unit container | 53711-7537885 | 1 ea. |
| Inlet Nozzle Lanyard | 53711-7343946 | 1 ea. |
| Exhaust Nozzle Lanyard | 53711-7243943 | 1 ea. |
| AC Power Cable | 53711-7343949 | 1 ea. |
| DU Power Cable | 53711-7343948 | 1 ea. |
| Tefzel Tubing | .250 X .031 NAT EFTE | 5 Ft |
| Power Strip | | 1 ea. |
| Carrying Strap | 10899 | 1 ea. |
| Simulent Tube | NSN 6665-01-382-7081 | 1 ea. |
| Technical Manual | | 1 ea. |

3.2.5.2 Components. Shipboard ACADA components shall be cleaned, preserved, and unit packaged, one item to a package to conform to MIL-E-17555, Level A protection requirements. Level A interior packaging of the components is necessary since some components are spared and are subject to user shipboard storage environments for extended periods. Unit packaging for items containing radioactive material shall conform to the special requirements of MIL-E-17555 pertaining to radioactive material.

3.2.5.3 Containers. Single Unit containers shall be of the reusable type in accordance with Drawing 53711-7537885 or similar container approved by NSWC Crane, Code 805D, to facilitate storage on-board ship and for return of repairable items to a depot for maintenance. The Shipboard ACADA and accessories shall be packaged in the single unit container containing items listed in 3.2.5.1, except for the spare Battery Box assembly, which will be unit packaged and included with the Shipboard ACADA system in the single exterior container.

3.2.6 Physical Configuration Audit (PCA). The contractor shall accommodate government personnel in a Physical Configuration Audit (PCA) of a production unit, at the Contractor's facility, from the first lot to be delivered in accordance with the contractor provided PCA Plan approved by NSWC Crane, Code 805D. The PCA shall be a formal examination of the as-built configuration against its design documentation. The contractor shall formally report the results of the PCA and prepare formal Engineering Change Proposals (ECPs) and Notice of Revisions (NORs) with supporting documentation for any required changes discovered during the process. NSWC Crane, Code 805D, shall approve any required changes.

3.2.6.1 Refurbishment of PCA unit(s). After successful completion and approval of the PCA, PCA units shall be refurbished as necessary to meet all operational requirements. After refurbishment, the item(s) shall be prepared for delivery as directed in the contract and delivered to the Contracting Activity.

3.2.7 Technical Manuals. The contractor shall produce technical manuals from digital files provided by

the contracting activity as Government Furnished Information. The contractor shall package one (1) technical manual with each system delivered.

3.2.8 Provisioning Technical Documentation (PTD). The contractor shall provide PTD for all new and alternate parts or components that occur as a result of changes to the Technical Data Package (Top Drawing Number 53711-7344570).

3.2.9 Program Planning

3.2.9.1 Program Management. The contractor shall establish and maintain management operations including the following areas:

- (a) Program Planning and Control
- (b) Subcontractor Control
- (c) Financial Management
- (d) Configuration Management
- (e) Management and Accountability for Government Furnished Equipment, Material or Information
- (f) Quality Assurance
- (g) Safety Program

The contractor shall report progress in a manner continuously affording the Government visibility into the contractor's progress. The contractor shall participate in informal Integrated Product Teams (IPTs) and In-Progress Review (IPR) meetings weekly and an initial start of Work meeting. In support of this effort the Contractor is required to prepare meeting minutes.

3.2.9.2 Configuration Management. The contractor shall provide a configuration management plan 30 days after award of contract. The contractor may propose changes to the configuration baseline. When a change is being considered, the contractor shall submit Engineering Change Proposals (ECPs) with Notice of Revisions (NORs), Request for Deviations (RFDs), and/or Requests for Waivers (RFWs) as applicable, via DCMC to NSWC Crane. (CDRL A002)

An ECP includes both engineering change and documentation by which a change is suggested and described.

A RFD describes a proposed (prior to manufacture) departure from the configuration baseline for a specific number of units or for a specified period of time.

A RFW is used to obtain authorization to deliver non-conforming material which does not meet the prescribed configuration documentation, but is suitable for use "as-is" or after repair.

A NOR depicts changes that must be made to technical documentation controlled by another contractor or Government activity following approval of an ECP.

No changes to the baseline shall be made unless approved by the Government in writing.

ECPs shall be classified as Class I or Class II. The change shall be Class I if:

a. The Functional Configuration is affected to the extent that any of the following requirements would be outside specified limits or specified tolerances:

- (1) Performance
- (2) Reliability, maintainability or survivability
- (3) Weight, balance, moment of inertia
- (4) Interface characteristics
- (5) Electromagnetic characteristics

b. A change to the Product Configuration documentation will affect the Functional configuration or will impact one or more of the following:

- (1) GFE
- (2) Safety
- (3) Compatibility or specified interoperability with interfacing Configuration Items (CI), support equipment or support software, spares, trainers or training devices/equipment/software
- (4) Configuration to the extent that retrofit action is required
- (5) Delivered operation and maintenance manuals for which adequate change/revision funding is not provided in existing contract
- (6) Preset adjustments or schedules affecting operating limits or performance to such extent as to require assignment of a new identification number
- (7) Interchangeability, substitutability, or replaceability as applied to CI and to all subassemblies and parts except the pieces and parts of non-reparable subassemblies
- (8) Sources of CIs or repairable items at any level defined by source-control drawings
- (9) Skills, manning, training, biomedical factors or human-engineering design

c. Any of the following contractual factors are affected:

- (1) Cost to the Government including incentives and fees
- (2) Contract guarantees or warranties
- (3) Contractual deliveries
- (4) Scheduled contract milestones

An engineering change which impacts none of the Class I factors specified above shall be classified as Class II ECPs.

3.2.9.3 Management and Accountability for Government Furnished Equipment, Material or Information.

When the government furnishes equipment, material or information, the contractor's procedures shall include at least the following:

- (a) Examination upon receipt, consistent with practicality, to detect damage in transit;
- (b) Inspection for completeness and proper type;
- (c) Periodic inspection and precautions to assure adequate storage conditions and to guard against damage from handling and deterioration during storage;

- (d) Functional testing, either prior to or after installation, or both, as required by contract to determine satisfactory operation;
- Identification and protection from improper use or disposition; and
- (f) Verification of quantity.

The contractor shall report to the government any government-furnished property found damaged, malfunctioning, or otherwise unsuitable for use. In the event of damage or malfunction during or after installation, the supplier shall determine and record probable cause and necessity for withholding material from use.

The contractor shall establish procedures for the adequate storage, maintenance, and inspection of government property. Records of all inspections and maintenance performed on property shall be maintained. These procedures and records shall be subject to review by the government.

As used in the foregoing, the term “material” applies to government-furnished equipment to be installed in or furnished with the end item. The term “property” is government equipment that is used in the fabrication or assembly of the end item, and is not delivered as part of the end item.

3.2.9.4 Quality Assurance

The contractor shall establish, implement, document and maintain a Quality Assurance Program that ensures conformance to contractual requirements and meets the requirements of ANSI/ASQC Q9001, or an equivalent quality system model.

3.2.9.4.1 Calibration and Instrumentation. A calibration and maintenance program shall be established and maintained to assure the accuracy of measuring devices used in the performance of this program. Measuring devices include test and inspection equipment, test support equipment, interface gages, standards, and equipment controlling special processes. Measurement devices also include production tools, jigs and fixtures used to provide evidence of quality conformance.

3.2.9.5 Safety Program. A total safety system program shall be established and maintained to reflect the requirements of the production and deployment phase, in accordance with MIL-STD-882 Task 101. The contractor shall comply with all local, state and federal regulations regarding the handling and disposal of hazardous materials and waste. The contractor shall comply with all of Section 4 and Figure 1. Appendix A shall be used to prioritize hazards and determine the acceptable level of risks.

3.2.9.5.1 Safety Assessment Report (SAR). The contractor shall provide a Safety Assessment Report (SAR) in accordance with MIL-STD-882 Task 301 prior to the first system test.

3.2.9.5.2 Test and Evaluation Safety. The contractor shall provide test and evaluation safety in accordance with MIL-STD-882 Task 302 for First Article and Production testing.

3.2.9.5.3 Engineering Change Proposals and Deviations/Waivers. The contractor shall determine the hazards and associated risks with Engineering Change Proposals (ECPs), Deviations and Waivers in accordance with MIL-STD-882 Task 303. If the contractor determines that the proposed ECP, deviation, or waiver affects system safety, he shall include a description of the impact in the proposal.

If he makes such a determination after submitting the documentation, he shall notify the Government in writing within 5 days of discovery.

ITEM(S) – LOT 1 CLIN 0004 or LOT II CLIN 0003 - DATA REQUIREMENTS (NAVSEA) (SEP 1992) – (5402)

The data to be furnished hereunder shall be prepared in accordance with the Contract Data Requirements List, DD Form 1423, Exhibit(s), attached hereto.

ITEM(S) LOT I CLIN 0003 or LOT II CLIN 0002 - PROVISIONED ITEMS ORDER (NAVSEA) (APR 1999) – (5404)

(a) General. The Contractor agrees that it will furnish the supplies or services ordered by the Government in accordance with the procedures specified herein. Orders may be placed by the Contracting Officer, Provisioning Activity or Administrative Contracting Officer as unilateral or bilateral modifications to this contract on SF 30, Amendment of Solicitation/Modification of Contract. Any amounts shown in Section B at time of award of the initial contract for each provisioned line item are estimated amounts only and are subject to upward or downward adjustment by the issuing activity. If no amounts are shown, funding will be obligated before or at time of order issuance. It is understood and agreed that the Government has no obligation under this contract to issue any orders hereunder.

(b) Priced Orders. For each proposed order, the Contractor agrees that it will submit such cost or pricing data as the Contracting Officer may require. Promptly thereafter, the Contractor and the Contracting Officer shall negotiate the price and delivery schedule for the proposed order. Upon execution and receipt of the priced order, the Contractor shall promptly commence the work specified in the order.

(c) Undefinitized Orders. Whenever the Contracting Officer determines that urgent demands or requirements prevent the issuance of a priced order, he/she may issue an unpriced order. Such order may be unilateral or bilateral and shall establish a limitation on Government liability, a maximum ceiling amount, and a schedule for definitization, as described in subparagraph (e)(2) below. Upon request the Contractor shall submit a maximum ceiling amount proposal before the undefinitized order is issued. The maximum ceiling amount is the maximum price at which the order may be definitized. The Contractor shall begin performing the undefinitized order upon receipt, except as provided in paragraph (d) below. The clause entitled "CONTRACT DEFINITIZATION" (DFARS 252.217-7027) shall be included in any undefinitized order.

(d) Rejection of Unilateral Orders. The Contractor may reject any unilateral order if the Contractor determines that it cannot feasibly perform the order, or if the Contractor does not concur with the maximum ceiling amount. However, each unilateral order shall be deemed to have been accepted by the Contractor unless within fifteen days of issuance of the order, the Contractor notifies the Contracting Officer in writing of its rejection of the order.

(e) Definitization of Undefinitized Orders.

(l) The Contractor agrees that following the issuance of an undefinitized order, it will promptly begin negotiating with the Contracting Officer the price and terms of a definitive order that will include: (A) all clauses required by regulation on the date of the order; (B) all clauses required by law on the date of execution of the definitive order; and, (C) any other mutually agreeable clauses, terms and conditions. No later than sixty (60) days after the undefinitized order is issued, the contractor agrees to submit a cost proposal with sufficient data to support the accuracy and derivation of its price; and, when required

by FAR, cost or pricing data, including SF 1411. If additional cost information is available prior to the conclusion of negotiations, the Contractor shall provide that information to the Contracting Officer. The price agreed upon shall be set forth in a bilateral modification to the order. In no event shall the price exceed the maximum ceiling amount specified in the undefinitized order.

(2) Each undefinitized order shall contain a schedule for definitization which shall include a target date for definitization and dates for submission of a qualifying proposal, beginning of negotiations and, if appropriate, submission of make-or-buy and subcontracting plans and cost or pricing data. Submission of a qualifying proposal in accordance with the definitization schedule is a material element of the order. The schedule shall provide for definitization of the order by the earlier of:

(i) a specified target date which is not more than 180 days after the issuance of the undefinitized order. However, that target date may be extended by the Contracting Officer for up to 180 days after the Contractor submits a qualifying proposal as defined in DFARS 217.7401; or

(ii) the date on which the amount of funds expended by the Contractor under the undefinitized order exceed fifty percent (50%) of the order's maximum ceiling amount, except as provided in subparagraph (f)(3) below.

(3) If agreement on a definitive order is not reached within the time provided pursuant to subparagraph (e)(2) above, the Contracting Officer may, with the approval of the Head of the Contracting Activity, determine a reasonable price in accordance with Subpart 15.8 and Part 31 of the FAR, and issue a unilateral order subject to Contractor appeal as provided in the "DISPUTES" clause (FAR 52.233-1). In any event, the Contractor shall proceed with completion of the order, subject to the "LIMITATION OF GOVERNMENT LIABILITY" clause (FAR 52.216-24).

(f) Limitation of Government Liability.

(1) Each undefinitized order shall set forth the limitation of Government liability, which shall be the maximum amount that the Government will be obligated to pay the Contractor for performance of the order until the order is definitized. The Contractor is not authorized to make expenditures or incur obligations exceeding the limitation of Government liability set forth in the order. If such expenditures are made, or if such obligations are incurred, they will be at the Contractor's sole risk and expense. Further, the limitation of liability shall be the maximum Government liability if the order is terminated. The "LIMITATION OF GOVERNMENT LIABILITY" clause shall be included in any undefinitized order.

(2) Except for undefinitized orders for Foreign Military Sales; purchases of less than \$25,000; special access programs; and Congressionally-mandated long-lead procurements; and except as otherwise provided in subparagraph (f)(3) below, the limitation of Government liability shall not exceed fifty percent (50%) of the ceiling amount of an undefinitized order. In the case of orders within these excepted categories, however, the procedures set forth herein shall be followed to the maximum extent practical.

(3) If the Contractor submits a qualifying proposal (as defined in DFARS 217.7401) to definitize an order before the Contractor has incurred costs in excess of fifty percent (50%) of the ceiling amount, the Contracting Officer may increase the limitation of Government liability to up to seventy-five percent (75%) of the maximum ceiling amount or up to seventy-five percent (75%) of the price proposed by the Contractor, whichever is less.

(4) If at any time the Contractor believes that its expenditure under an undefinitized order will exceed the limitation of Government liability, the Contractor shall so notify the Contracting Officer, in writing, and propose an appropriate increase in the limitation of Government liability of such order. Within thirty (30) days of such notice, the Contracting Officer will either (i) notify the Contractor in writing of such appropriate increase, or (ii) instruct the Contractor how and to what extent the work shall be continued; provided, however, that in no event shall the Contractor be obligated to proceed with

work on an undefinitized order beyond the point where its costs incurred plus a reasonable profit thereon exceed the limitation of Government liability, and provided also that in no event shall the Government be obligated to pay the Contractor any amount in excess of the limitation of Government liability specified in any such order prior to establishment of firm prices.

(g) Initial Spares. The limitations set forth in paragraph (c) and subparagraphs (e)(2), (f)(2) and (f)(3) do not apply to undefinitized orders for the purchase of initial spares.

(h) Terminal Date for Placement of Orders. The Contractor shall not be obligated to accept any orders placed hereunder beyond 180 days after delivery of the last end item.

(i) Segregation of Costs. The Contractor shall segregate the costs of performance of each undefinitized order from the cost of performance of any other work performed by the Contractor.

ASSIGNMENT AND USE OF NATIONAL STOCK NUMBERS (NAVSEA) (MAY 1993) – (5407)

To the extent that National Stock Numbers (NSNs) or preliminary NSNs are assigned by the Government for the identification of parts, pieces, items, subassemblies or assemblies to be furnished under this contract, the Contractor shall use such NSNs or preliminary NSNs in the preparation of provisioning lists, package labels, packing lists, shipping containers and shipping documents as required by applicable specifications, standards or Data Item Descriptions of the contract or as required by orders for spare and repair parts. The cognizant Government Contract Administration Office shall be responsible for providing the Contractor such NSNs or preliminary NSNs which may be assigned and which are not already in possession of the Contractor.

FIRST ARTICLE (CONTRACTOR TESTING) (NAVSEA) (SEP 1990) - (5410)

(a) For the purpose of this contract, the "First Article" is synonymous with the terms "preproduction model(s)" and "preproduction equipment".

(b) The First Article shall conform in every respect to the requirements of this contract and shall be fully tested by the Contractor at its own expense to determine compliance with said requirements. The production equipment shall be manufactured with tools, material and methods which are the same as or representative of the tools, material and methods which were used to manufacture the First Article.

(c) Pursuant to paragraph (e) of the clause entitled "FIRST ARTICLE APPROVAL--CONTRACTOR TESTING" (FAR 52.209-3), the First Article shall not be delivered as part of the production quantity.*

INFORMATION AND DATA FURNISHED BY THE GOVERNMENT - ALTERNATE II (NAVSEA) (MAY 1993) – (5413)

(a) NAVSEA Form 4340/2 or Schedule C, as applicable, Government Furnished Information, attached hereto, incorporates by listing or specific reference all the data or information which the Government has provided or will provide to the Contractor except for -

(1) The specifications set forth in Section C, and

(2) Government specifications, including drawings and other Government technical documentation which are referenced directly or indirectly in the specifications set forth in Section C and which are applicable to this contract as specifications, and which are generally available and provided to Contractors or prospective Contractors upon proper request, such as Federal or Military Specifications, and Standard Drawings, etc.

(b) Except for the specifications referred to in subparagraphs (a)(1) and (2) above, the Government will not be obligated to provide to the Contractor any specification, drawing, technical documentation or

other publication which is not listed or specifically referenced in NAVSEA Form 4340/2 or Schedule C, as applicable, notwithstanding anything to the contrary in the specifications, the publications listed or specifically referenced in NAVSEA Form 4340/2 or Schedule C, as applicable, the clause entitled "GOVERNMENT PROPERTY (FIXED-PRICE CONTRACTS)" (FAR 52.245-2), or "GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS)" (FAR 52.245-5), as applicable, or any other term or condition of this contract.

(c) (1) The Contracting Officer may at any time by written order:

- (i) delete, supersede, or revise, in whole or in part, data listed or specifically referenced in NAVSEA Form 4340/2 or Schedule C, as applicable; or
- (ii) add items of data or information to NAVSEA Form 4340/2 or Schedule C, as applicable; or
- (iii) establish or revise due dates for items of data information in NAVSEA Form 4340/2 or Schedule C, as applicable.

(2) If any action taken by the Contracting Officer pursuant to subparagraph (c)(1) immediately above causes an increase or decrease in the costs of; or the time required for performance of any part of the work under this contract an equitable adjustment shall be made in the contract amount and delivery schedule in accordance with the procedures provided for in the "CHANGES" clause of this contract.

PERMITS AND RESPONSIBILITIES (NAVSEA) (SEP 1990) – (5416)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any applicable Federal, State, and Municipal laws, codes, and regulations, in connection with any movement over the public highways of overweight/overdimensional materials.

UPDATING SPECIFICATIONS AND STANDARDS (NAVSEA) (AUG 1994)(5420)

If, during the performance of this or any other contract, the contractor believes that any contract contains outdated or different versions of any specifications or standards, the contractor may request that all of its contracts be updated to include the current version of the applicable specification or standard. Updating shall not affect the form, fit or function of the deliverable item or increase the cost/price of the item to the Government. The contractor should submit update requests to the Procuring Contracting Officer with copies to the Administrative Contracting Officer and cognizant program office representative for approval. The contractor shall perform the contract in accordance with the existing specifications and standards until notified of approval/disapproval by the Procuring Contracting Officer. Any approved alternate specifications or standards will be incorporated into the contract.

SECTION "D" - PACKAGING AND MARKING

PROHIBITED PACKING MATERIALS

The use of asbestos, excelsior, newspaper or shredded paper (all types including waxed paper, computer paper and similar hygroscopic or non-neutral material) is prohibited. In addition, loose fill polystyrene is prohibited for shipboard use.

PREPARATION FOR DELIVERY (5510)

(1) PRESERVATION-PACKAGING. Preservation-packaging for Item(s) ALL shall be in accordance with the requirements

of MIL-E-17555, Level A as specified in the Statement of Work.

(2) PACKING. Item(s) ALL preserved-packaged as above shall be packed level MIL-E-17555, Level A as specified in the Statement of Work.

DATA PACKAGING LANGUAGE (5503)

All unclassified data shall be prepared for shipment in accordance with best commercial practice. Classified reports, data, and documentation shall be prepared for shipment in accordance with National Industrial Security Program Operating Manual (NISPOM), DOD 5220.22-M dated January 1995.

IDENTIFICATION MARKING OF PARTS (NAVSEA) (NOV 1996) (5504)

(a) Identification marking of individual parts within the systems, equipment, assemblies, subassemblies, components, groups, sets or kits, and of spare and repair parts shall be done in accordance with applicable specifications and drawings. To the extent identification marking of such parts is not specified in applicable specifications or drawings, such marking shall be accomplished in accordance with the following:

(1) Parts shall be marked in accordance with generally accepted commercial practice.

(2) In cases where parts are so small as not to permit identification marking as provided above, such parts shall be appropriately coded so as to permit ready identification.

MARKING AND PACKING LIST(S) (NAVSEA) (NOV 1996) (5505)

(a) Marking. Shipments, shipping containers and palletized unit loads shall be marked in accordance with best commercial practice.

(b) Packing List(s). A packing list (DD Form 250 Material Inspection and Receiving Report may be used) identifying the contents of each shipment, shipping container or palletized unit load shall be provided by the Contractor with each shipment. When a contract line item identified under a single stock number includes an assortment of related items such as kit or set components, detached parts or accessories, installation hardware or material, the packing list(s) shall identify the assorted items. Where assortment of related items is included in the shipping container, a packing list identifying the contents shall be furnished.

(c) Master Packing List. In addition to the requirements in paragraph (b) above, a master packing list

shall be prepared where more than one shipment, shipping container or palletized unit load comprise the contract line item being shipped. The master packing list shall be attached to the number one container and so identified.

(d) Part Identification. All items within the kit, set, installation hardware or material shall be suitably segregated and identified within the unit pack(s) or shipping container by part number and/or national stock number.

MARKING OF WARRANTED ITEMS (NAVSURFWARCENDIV)(5508)

(a) Each item covered by a warranty shall be stamped or marked in accordance with MIL-STD-129, Marking for Shipment and Storage. Where this is impracticable, written notice shall be attached to or furnished with the warranted item.

(b) Warranted items shall be marked with the following information:

- (1) National stock number or manufacturer's part number
- (2) Serial number or other item identifier (if the warranty applies to uniquely identified items)
- (3) Contract number
- (4) Indication that a warranty applies
- (5) Manufacturer or entity (if other than the contractor) providing the warranty
- (6) Date or time when the warranty expires
- (7) Indication of whether or not attempted on-site repair by Government personnel will void the warranty.

MARKING FOR SHIPMENT (5511)

The Contractor shall mark all shipments under a resulting contract to include the following items:

Contract Number; Item Number; Lot Number (when applicable); Part Number; National Stock Number; Contractor Model Number;
Serial Number; Packing Date; Attn: S CLARK Code 805, Bldg. 3324

INSTRUCTIONS FOR MARKING DISTRIBUTION STATEMENT (5513)

The Contractor shall comply with the instructions cited below for placement of the distribution statement associated with data. The applicable distribution statement is identified on each Contract Data Requirements List (DD Form 1423-1).

The distribution statement shall be displayed conspicuously on technical documents so as to be recognized readily by receipts. The distribution statement shall appear on each front cover and title page of a report. If the technical document does not have a cover or title page, the applicable distribution statement shall be stamped or typed on the front page in a conspicuous position.

SECTION "E" - INSPECTION AND ACCEPTANCE

I. FEDERAL ACQUISITION REGULATION (FAR) (48 CFR CHAPTER 1) CLAUSES

II. DEFENSE FAR SUPPLEMENT (DFARS) (48 CFR CHAPTER 2) CLAUSES

PART I

| <u>FAR Subsection</u> | <u>Title</u> | <u>Date</u> |
|-----------------------|--|-------------|
| 52.246-02 | Inspection of Supplies--Fixed-Price | Aug 1996 |
| 52.246-16 | Responsibility for Supplies | Apr 1984 |
| | | |
| | PART II | |
| 252.246-7000 | Material Inspection and Receiving Report | Dec 1991 |

CLAUSES IN FULL TEXT**HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT (FEB 1999) (FAR 52.246-11)**

The Contractor shall comply with the higher-level quality standard selected below.

| <u>Title</u> | <u>Number</u> | <u>Date</u> | <u>Tailoring</u> |
|------------------|----------------------------|-------------|------------------|
| <u>ANSI/ASQC</u> | <u>Q9001 OR EQUIVELANT</u> | | |
| | | | |
| | | | |
| | | | |

INSPECTION AND ACCEPTANCE LANGUAGE FOR DATA (5602)

Inspection and acceptance of all data shall be as specified on the attached Contract Data Requirements List(s), DD Form 1423.

INSPECTION AND ACCEPTANCE LANGUAGE FOR F.O.B. DESTINATION (5604)

Item(s) ALL CLINS - Inspection and acceptance shall be made at destination by a representative of the Government.

INSPECTION AND ACCEPTANCE (SPECIAL CONDITIONS) (5606)

(a) Initial inspection of the supplies to be furnished hereunder shall be made by DCM QAR PERSONNEL at the contractor's or subcontractor's plant located at TBD. The cognizant inspector **shall be notified 10 days in** advance of when the material is available for inspection. The place designated for such actions may not be changed without authorization of the Contracting Officer. Final inspection and acceptance shall be made by REQUIRING TECHINCAL ACTIVITY within 30 days after RECEIPT OF SYSTEMS.

(b) Initial inspection shall consist of quality assurance at point of manufacture and/or assembly and check/test prior to shipment. Final inspection and acceptance will be made by the Receiving Activity after installation/check out/testing of the supplies.

INSPECTION AND TEST RECORDS (MAY 1995) (5612)

Inspection and Test Records: Inspection and test records shall, as a minimum, indicate the nature of the observations, number of observations made, and the number and type of deficiencies found. Data included in inspection and test records shall be complete and accurate, and shall be used for trend analysis and to assess corrective action and effectiveness.

QUALITY SYSTEM REQUIREMENTS (NAVSEA) (MAY 1995) (5614)

Quality System Requirements: The Contractor shall provide and maintain a quality system that, as a minimum, adheres to the requirements of ANSI/ASQC Q9001-1994 Quality Systems-Model for Quality Assurance in Design/Development, Production, Installation, and Servicing and supplemental requirements imposed by this contract. The quality system procedures, planning, and all other documentation and data that comprise the quality system shall be made available to the Government for review. Existing quality documents that meet the requirements of this contract may continue to be used. The Government may perform any necessary inspections, verifications, and evaluations to ascertain conformance to requirements and the adequacy of the implementing procedures. The Contractor shall require of subcontractors a quality system achieving control of the quality of the services and/or supplies provided. The Government reserves the right to disapprove the quality system or portions thereof when it fails to meet the contractual requirements.

USE OF CONTRACTOR'S INSPECTION EQUIPMENT (NAVSEA) (MAY 1995) (5616)

Use of Contractor's Inspection Equipment: The contractor's gages, and measuring and testing devices shall be made available for use by the Government when required to determine conformance with contract requirements. If conditions warrant, the contractor's personnel shall be made available for operations of such devices and for verification of their accuracy and condition.

PS/01/8855/002
05 June 2001
SECTION "F" - DELIVERIES OR PERFORMANCE
PART I

| <u>FAR Subsection</u> | <u>Title</u> | <u>Date</u> |
|-----------------------|--|-------------|
| 52.242-15 | Stop Work Order | Aug 1989 |
| 52.242-17 | Government Delay of Work | Apr 1984 |
| 52.247-34 | F.o.b. Destination | Nov 1991 |
| 52.247-55 | F.o.b. Point for Delivery of Government-Furnished Property | Apr 1984 |

CLAUSES IN FULL TEXT

TIME OF DELIVERY (JUNE 1997) (FAR 52.211-8)

(a) The Government requires delivery to be made according to the following schedule:
REQUIRED DELIVERY SCHEDULE

| <u>ITEM NO.</u> | <u>QUANTITY</u> | <u>WITHIN DAYS AFTER DATE OF CONTRACT</u> |
|-----------------|--|--|
| LOT I | | |
| <u>0001</u> | <u>3 EA</u> | <u>300 DAYS AFTER EFFECTIVE DATE OF ORDER</u> |
| <u>0002AA</u> | <u>362 EA MIN</u> | <u>360 DAYS FROM EFFECTIVE DATE OF ORDER, AND EACH THEREAFTER EVERY 30 DAYS UNTIL THE QUANTITY IS COMPLETE</u> |
| <u>0002AA</u> | <u>TBD ON INDIVIDUAL DELIVERY ORDERS</u> | <u>TO BE ESTABLISHED ON INDIVIDUAL DELIVERY ORDERS, AT A RATE NOT TO EXCEED 30 EVERY 30 DAYS</u> |
| <u>0003</u> | <u>TBD ON INDIVIDUAL DELIVERY ORDER</u> | <u>TBD ON INDIVIDUAL DELIVERY ORDERS</u> |
| <u>0004</u> | <u>1 LO</u> | <u>IAW DD1423'S</u> |
| LOT II | | |
| <u>0001AA</u> | <u>362 EA MIN</u> | <u>360 DAYS FROM EFFECTIVE DATE OF ORDER, AND EACH THEREAFTER EVERY 30 DAYS UNTIL THE QUANTITY IS COMPLETE</u> |
| <u>0001AA</u> | <u>TBD ON INDIVIDUAL DELIVERY ORDERS</u> | <u>TO BE ESTABLISHED ON INDIVIDUAL DELIVERY ORDERS, AT A RATE NOT TO EXCEED 30 EVERY 30 DAYS</u> |
| <u>0002</u> | <u>TBD ON INDIVIDUAL DELIVERY ORDER</u> | <u>TBD ON INDIVIDUAL DELIVERY ORDERS</u> |
| <u>0003</u> | <u>1 LO</u> | <u>IAW DD1423'S</u> |

The Government will evaluate equally, as regards time of delivery, offers that propose delivery of each quantity within the applicable delivery period specified above. Offers that propose delivery that will not clearly fall within the applicable required delivery period specified above, will be considered nonresponsive and rejected. The Government reserves the right to award under either the required delivery schedule or the proposed delivery schedule, when an offeror offers an earlier delivery schedule than required above. If the offeror proposes no other delivery schedule, the required delivery schedule above will apply.

OFFEROR'S PROPOSED DELIVERY SCHEDULE

PS/01/8855/002
05 June 2001

| ITEM NO. | QUANTITY | WITHIN DAYS | |
|----------|----------|---------------------------|-------|
| | | AFTER DATE OF CONTRACT | |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

(b) Attention is directed to the Contract Award provision of the solicitation that provides that a written award or acceptance of offer mailed, or otherwise furnished to the successful offeror, results in a binding contract. The Government will mail or otherwise furnish to the offeror an award or notice of award not later than the day award is dated. Therefore, the offeror should compute the time available for performance beginning with the actual date of award, rather than the date the written notice of award is received from the Contracting Officer through the ordinary mails. However, the Government will evaluate an offer that proposes delivery based on the Contractor's date of receipt of the contract or notice of award by adding (i) five calendar days for delivery of the award through the ordinary mails, or (ii) one working day if the solicitation states that the contract or notice of award will be transmitted electronically. (The term "working day" excludes weekends and U.S. Federal holidays.) If, as so computed, the offered delivery date is later than the required delivery date, the offer will be considered nonresponsive and rejected.

DELIVERY LANGUAGE FOR F.O.B. DESTINATION (5704)

All supplies hereunder shall be delivered with all transportation charges prepaid, in accordance with the clause hereof entitled "F.O.B. DESTINATION" (FAR 52.247-34). The Contractor shall not ship directly to a military air or water port terminal without authorization by the cognizant Contract Administration Office. Except when the Material Inspection and Receiving Report (MIRR) (DD 250) is used as an invoice, the Contractor shall enter unit prices on all MIRR copies. Contract line items shall be priced using actual prices, or if not available, estimated prices. When the price is estimated, an "E" shall be entered after the price. All data to be furnished under this contract shall be delivered prepaid to destination(s) at the time(s) specified on the Contract Data Requirements List(s), DD Form 1423.

PLACE OF DELIVERY (5707)

The material to be furnished hereunder shall be delivered F.o.b. destination with all transportation charges paid by the supplier to: RECEIVING OFFICER; **3324 CODE 805D**; NAVSURFWARCDIV; CRANE, IN 47522-5011; Mark For: Attn: CLEVE BENTON/SANDY CLARK, CODE 805
The contractor shall schedule deliveries under this contract to ensure arrival at destination only on Monday through Friday (excluding holidays) between the hours of 7:00 AM and 2:00 PM EST. The receiving facility for this material is closed on Saturdays and Sundays.

PS/01/8855/002

05 June 2001

SECTION "G" - CONTRACT ADMINISTRATION DATA

GENERAL PROCUREMENT INFORMATION

SUBMISSION OF INVOICES (FIXED PRICE) (JUL 1992) (NAPS 5252.232-9000)

- (a) "Invoice" as used in this clause does not include contractor's requests for progress payments.
- (b) The contractor shall submit original invoices with 4 copies to the address identified in the solicitation/contract award form (SF 26 - Block 10; SF 33 - Block 23; SF 1447 - Block 14), unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order (DD 1155 - Block 13 or SF 26 Block 10).
- (c) The use of copies of the Material Inspection and Receiving Report (MIRR), DD Form 250, as an invoice is encouraged. DFARS Appendix F-306 provides instructions for such use. Copies of the MIRR used as an invoice are in addition to the standard distribution stated in DFARS F-401.
- (d) In addition to the requirements of the Prompt Payment clause of this contract, the contractor shall cite on each invoice the contract line item number (CLIN); the contract subline item number (SLIN), if applicable; the accounting classification reference number (ACRN) as identified on the financial accounting data sheets, and the payment terms.
- (e) The contractor shall prepare:
- ☐ a separate invoice for each activity designated to receive the supplies or services.
 - ☐ a consolidated invoice covering all shipments delivered under an individual order.
 - ☐ * either of the above.
- (f) If acceptance is at origin, the contractor shall submit the MIRR or other acceptance verification directly to the designated payment office. If acceptance is at destination, the consignee will forward acceptance verification to the designated payment office.

CONTRACT ADMINISTRATION DATA LANGUAGE (5802)

Enter below the address (street and number, city, county, state and zip code) of the Contractor's facility which will administer the contract if such address is different from the address shown on the SF26 or SF33 as applicable.

PURCHASING OFFICE REPRESENTATIVE LANGUAGE (5804)

PURCHASING OFFICE REPRESENTATIVE: COMMANDER; ATTN: CODE 1165ZS BLDG 3291
NAVAL SURFACE WARFARE CENTER; CRANE
DIVISION Attn: Marlene Siddons
CRANE IN 47522-5011; Telephone No. 812-854- 3856

BUSINESS HOURS

Crane Division, Naval Surface Warfare Center, Crane, Indiana, allows flexible working hours for its employees. The normal eight-hour shift may be worked between the hours of 6:30 AM and 5:30 PM EST. Many of our employees work 6:30 AM to 3:00 PM as a regular practice. The core time, when all employees are scheduled to work, is 9:00 AM to 3:00 PM.

EXPEDITING CONTRACT CLOSEOUT (NAVSEA) (DEC 1995)

(a) As part of the negotiated fixed price or total estimated amount of this contract, both the Government and the Contractor have agreed to waive any entitlement that otherwise might accrue to either party in any residual dollar amount of \$500 or less at the time of final contract closeout. The term "residual dollar amount" shall include all money that would otherwise be owed to either party at the end of the contract except that, amounts connected in any way with taxation, allegations of fraud and/or antitrust violations shall be excluded. For purposes of determining residual dollar amounts, offsets of money owed by one party against money that would otherwise be paid by that party may be considered to the extent permitted by law.

(b) This agreement to waive entitlement to residual dollar amounts has been considered by both parties. It is agreed that the administrative costs for either party associated with collected such small dollar amounts could exceed the amount to be recovered.

Other Notes:

(1) The Government reserves the right to waive first article testing and approval if supplies similar or identical to those called for have been previously delivered by the offeror and accepted by the Government. Therefore, alternate offers are permitted. Lot I includes first article while Lot II does not. Award will be made by lot, and only one lot will be awarded.

(2) The agency authorized to place delivery orders against this contract is: Crane Division, Naval Surface Warfare Center, Crane, IN 47522.

(3) Delivery orders shall be placed against this contract using a DD 1155.

(4) Delivery orders placed under this contract shall be placed no later than 3 years from effective date of contract (date)

CONTRACTOR PERFORMANCE ASSESSMENT RATING SYSTEM (CPARS) (JAN 2001)

(a) Pursuant to FAR 42.1502, this contract is subject to DoD's Contractor Performance Assessment System (CPARS). CPARS is an automated centralized information system accessible via the Internet that maintains reports of contractor performance for each contract. CPARS is located at <http://www.cpars.navy.mil/>. Further information on CPARS is available at that web-site.

(b) Under CPARS, the Government will conduct annual evaluations of the contractor's performance. The contractor has thirty (30) days after the Government's evaluation is completed to comment on the evaluation. The opportunity to review and comment is limited to this time period and will not be extended.

PS/01/8855/002

05 June 2001

Failure to review the report at this time will not prevent the Government from using the report.

(c) The contractor may request a meeting to discuss the CPAR. The meeting is to be requested via e-mail to the CPARS Program Manager no later than seven days following receipt of the CPAR. A meeting will then be held during the contractor's 30-day review period.

(d) The CPARS system requires the Government to assign the contractor a UserID and password in order to view and comment on the evaluation. Provide the name(s) of at least one individual (not more than three) that will be assigned as your Defense Contractor Representative for CPARS.

| <u>Name</u> | <u>Phone</u> | <u>E-mail Address (optional)</u> |
|-------------|--------------|----------------------------------|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

PS/01/8855/002
05 June 2001

SECTION "H" - SPECIAL CONTRACT REQUIREMENTS

ADDITIONAL DEFINITIONS (MAY 1993) (NAVSEA 5252.202-9101)

As used throughout this contract, the following terms shall have the meanings set forth below:

- (a) DEPARTMENT - means the Department of the Navy.
- (b) REFERENCES TO THE FEDERAL ACQUISITION REGULATION (FAR) - All references to the FAR in this contract shall be deemed to also reference the appropriate sections of the Defense FAR Supplement (DFARS), unless clearly indicated otherwise.
- (c) REFERENCES TO ARMED SERVICES PROCUREMENT REGULATION OR DEFENSE ACQUISITION REGULATION - All references in this document to either the Armed Services Procurement Regulation (ASPR) or the Defense Acquisition Regulation (DAR) shall be deemed to be references to the appropriate sections of the FAR/DFARS.
- (d) NATIONAL STOCK NUMBERS - Whenever the term Federal Item Identification Number and its acronym FIIN or the term Federal Stock Number and its acronym FSN appear in the contract, order or their cited specifications and standards, the terms and acronyms shall be interpreted as National Item Identification Number (NIIN) and National Stock Number (NSN) respectively which shall be defined as follows:
 - (1) National Item Identification Number (NIIN). The number assigned to each approved Item Identification under the Federal Cataloging Program. It consists of nine numeric characters, the first two of which are the National Codification Bureau (NCB) Code. The remaining positions consist of a seven digit non-significant number.
 - (2) National Stock Number (NSN). The National Stock Number (NSN) for an item of supply consists of the applicable four position Federal Supply Class (FSC) plus the applicable nine position NIIN assigned to the item of supply.

GOVERNMENT-INDUSTRY DATA EXCHANGE PROGRAM (AUG 1997) (NAVSEA 5252.227-9113)

- (a) The Contractor shall participate in the appropriate interchange of the Government-Industry Data Exchange Program (GIDEP) in accordance with NAVSEA S0300-BU-GYD-010 dated November 1994. Data entered is retained by the program and provided to qualified participants. Compliance with this requirement shall not relieve the Contractor from complying with any other requirement of the contract.
- (b) The Contractor agrees to insert paragraph (a) of this requirement in any subcontract hereunder exceeding \$500,000.00. When so inserted, the word "Contractor" shall be changed to "Subcontractor".
- (c) GIDEP materials, software and information are available without charge from:

GIDEP Operations Center
P.O. Box 8000
Corona, CA 91718-8000
Phone: (909) 273-4677 or DSN 933-4677
FAX: (909) 273-5200
Internet: <http://www.gidep.corona.navy.mil>

PS/01/8855/002
05 June 2001
SECTION "I" - CONTRACT CLAUSES

PART I

| <u>FAR Subsection</u> | <u>Title</u> | <u>Date</u> |
|-----------------------|---|-------------|
| 52.202-01 | Definitions | Oct 1995 |
| 52.203-03 | Gratuities | Apr 1984 |
| 52.203-05 | Covenant Against Contingent Fees | Apr1984 |
| 52.203-06 | Restrictions on Subcontractor Sales to the Government | Jul 1995 |
| 52.203-07 | Anti-Kickback Procedures | Jul 1995 |
| 52.203-08 | Cancellation, Rescission, and Recovery of Funds for illegal or Improper Activity | Jan 1997 |
| 52.203-10 | Price or Fee Adjustment for Illegal or Improper Activity | Jan 1997 |
| 52.203-12 | Limitation on Payments to Influence Certain Federal Transactions | Jun 1997 |
| 52.204-04 | Printing/Copying Double-Sided on Recycled Paper | Aug 2000 |
| 52.209-06 | Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Debarment | Jul 1995 |
| 52.211-05 | Material Requirements | Aug 2000 |
| 52.211-15 | Defense Priority and Allocation Requirements | Sep 1990 |
| 52.215-02 | Audit and Records Negotiation | Jun 1999 |
| 52.215-08 | Order of Precedence-Uniform Contract Format | Oct 1997 |
| 52.215-11 | Price Reduction for Defective Cost or Pricing Data--Modifications | Oct 1997 |
| 52.215-13 | Subcontractor Cost or Pricing Data—Modifications | Oct 1997 |
| 52.215-14 | Integrity of Unit Prices | Oct 1997 |
| 52.219-08 | Utilization of Small Business Concerns | Oct 2000 |
| 52.219-14 | Limitations on Subcontracting | Dec 1996 |
| 52.222-19 | Child Labor –Cooperation with Aughroities and Remedies | Feb 2001 |
| 52.222-20 | Walsh-Healey Public Contracts Act | Dec 1996 |
| 52.222-21 | Prohibition of Segregated Facilities | Feb 1999 |
| 52.222-26 | Equal Opportunity | Feb 1999 |
| 52.222-35 | Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era | Apr 1998 |
| 52.222-36 | Affirmative Action for Workers with Disabilities | Jun 1998 |
| 52.222-37 | Employment Reports on Disabled Veterans and Veterans of the Vietnam Era | Jan 1999 |
| 52.223-06 | Drug-Free Workplace | Jan 1997 |
| 52.223-14 | Toxic Chemical Release Reporting | Oct 2000 |
| 52.225-08 | Duty-Free Entry | Feb 2000 |
| 52.225-13 | Restrictions on Certain Foreign Purchases | Jul 2000 |
| 52.226-01 | Utilization of Indian Organizations and Indian-Owned Economic Enterprises | Jun 2000 |
| 52.227-01 | Authorization and Consent | Jul 1995 |
| 52.227-02 | Notice and Assistance Regarding Patent and Copyright Infringement | Aug 1996 |
| 52.229-03 | Federal, State, and Local Taxes | Jan 1991 |

05 June 2001

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|-----------------------------------|--|-------------|
| 52.229-05 | Taxes—Contracts performed in U.S. Possessions or Puerto Rico | Apr 1984 |
| 52.232-01 | Payments | Apr 1984 |
| 52.232-08 | Discounts for Prompt Payment | May 1997 |
| 52.232-11 | Extras | Apr 1984 |
| 52.232-17 | Interest | Jun 1996 |
| 52.232-23 | Assignment of Claims (Jan 1986)--Alternate I | Apr 1984 |
| 52.232-25 | Prompt Payment | May 2001 |
| 52.232-33 | Payment by Electronic Funds Transfer--Central Contractor Registration | May 1999 |
| 52.233-01 | Disputes | Dec 1998 |
| 52.233-03 | Protest After Award | Aug 1996 |
| 52.242-13 | Bankruptcy | Jul 1995 |
| 52.243-01 | Changes | Aug 1987 |
| 52.243-06 | Change Order Accounting | Apr 1984 |
| 52.246-24 | Limitation of Liability-- High Value Items | Feb 1997 |
| 52.247-64 | Preference for Privately owned U.S.-Flag Commercial Vessels | Jun 2000 |
| 52.249-02 | Termination for Convenience of the Government (Fixed-Price) | Sep 1996 |
| 52.249-08 | Default (Fixed-Price Supply and Service) | Apr 1984 |
| 52.253-01 | Computer Generated Forms | Jan 1991 |
| | | |
| | <u>PART II</u> | |
| <u>DFARS</u> <u>Subsection</u> | <u>Title</u> | <u>Date</u> |
| 252.203-7001 | Prohibition on Persons Convicted of Fraud or Other Defense-Contract-Related Felonies | Mar 1999 |
| 252.203-7002 | Display of DOD Hotline Poster | Dec 1991 |
| 252.204-7003 | Control of Government Personnel Work Product | Apr 1992 |
| 252.204-7004 | Commercial and Government Entity (CAGE) Code Reporting | Mar 2000 |
| 252.205-7000 | Provision of Information to Cooperative Agreement Holders | Dec 1991 |
| 252.209-7000 | Acquisition from Subcontractors Subject to On-Site Inspection Under the Intermediate-Range Nuclear Forces (INF) Treaty | Nov 1995 |
| 252.209-7004 | Subcontracting with Firms that are owned or controlled by the Government of a Terrorist Country | May 1998 |
| | | |
| 252.223-7006 | Prohibition on Storage and Disposal of Toxic and Hazardous Materials | Apr 1993 |
| 252.225-7001 | Buy American Act and Balance of Payments Program | Apr 2000 |
| 252.225-7002 | Qualifying Country Sources as Subcontractors | Dec 1991 |
| 252.225-7009 | Duty-Free Entry--Qualifying Country End Products and Supplies | Aug 2000 |
| 252.225-7010 | Duty-Free Entry--Additional Provisions | Aug 2000 |
| 252.225-7012 | Preference for Certain Domestic Commodities | Aug 2000 |
| 252.225-7016 | Restriction on Acquisition of Ball or Roller Bearings | Dec 2000 |
| 252.225-7025 | Restrictions on Acquisitions of Forgings | Jun 1997 |
| 252.225-7026 | Reporting of Contract Performance Outside the United States | Jun 2000 |
| 252.225-7031 | Secondary Arab Boycott of Israel | Jun 1992 |

PS/01/8855/002
05 June 2001

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|--------------|---|----------|
| 252.227-7016 | Rights in Bid or Proposal Information | Jun 1995 |
| 252.227-7030 | Technical Data--Withholding of Payment | Mar 2000 |
| 252.227-7036 | Declaration Of Technical Data Conformity | Jan 1997 |
| 252.227-7037 | Validation of Restrictive Markings on Technical Data | Nov 1995 |
| 252.231-7000 | Supplemental Cost Principles | Dec 1991 |
| 252.243-7001 | Pricing of Contract Modifications | Dec 1991 |
| 252.243-7002 | Request for Equitable Adjustment | Mar 1998 |
| 252.244-7000 | Subcontracts for Commercial Items and Commercial Components (DOD Contracts) | Mar 2000 |
| 252.246-7000 | Material Inspection and Receiving Report | Dec 1991 |
| 252.247-7023 | Transportation of Supplies by Sea | Mar 2000 |

CLAUSES IN FULL TEXT

FIRST ARTICLE APPROVAL-CONTRACTOR TESTING (SEP 1989) (FAR 52.209-3)

(a) The Contractor shall test 3 FA unit(s) of Lot/Item(s) LOT I/CLIN 0001 as specified in this contract. At least 7 calendar days before the beginning of first article tests, the Contractor shall notify the Contracting Officer, in writing, of the time and location of the testing so that the Government may witness the tests.

(b) The Contractor shall submit the first article test report within 300 calendar days from the date of this contract/delivery order to CODE 805 BLDG 3324, ATTN: S CLARK , NSWC CRANE, 300 HWY 361, CRANE IN 47522-5001 marked "FIRST ARTICLE TEST REPORT: Contract No. TBD, Lot/Item No. LOT I / CLIN 0001." Within 30 calendar days after the Government receives the test report, the Contracting Officer shall notify the Contractor, in writing, of the conditional approval, approval, or disapproval of the first article. The notice of conditional approval or approval shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor. A notice of disapproval shall cite reasons for the disapproval.

(c) If the first article is disapproved, the Contractor, upon Government request, shall repeat any or all first article tests. After each request for additional tests, the Contractor shall make any necessary changes, modifications, or repairs to the first article or select another first article for testing. All costs related to these tests are to be borne by the Contractor, including any and all costs for additional tests following a disapproval. The Contractor shall then conduct the tests and deliver another report to the Government under the terms and conditions and within the time specified by the Government. The Government shall take action on this report within the time specified in paragraph (b) above. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule, or for any additional costs to the Government related to these tests.

(d) If the Contractor fails to deliver any first article report on time, or the Contracting Officer disapproves any first article, the Contractor shall be deemed to have failed to make delivery within the meaning of the Default clause of this contract.

(e) Unless otherwise provided in the contract, and if the approved first article is not consumed or destroyed in testing, the Contractor may deliver the approved first article as part of the contract quantity

PS/01/8855/002

05 June 2001

if it meets all contract requirements for acceptance.

(f) If the Government does not act within the time specified in paragraph (b) or (c) above, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the Changes clause of this contract the delivery or performance dates and/or the contract price, and any other contractual term affected by the delay.

(g) Before first article approval, the acquisition of materials or components for, or the commencement of production of, the balance of the contract quantity is at the sole risk of the Contractor. Before first article approval, the costs thereof shall not be allocable to this contract for (1) progress payments, or (2) termination settlements if the contract is terminated for the convenience of the Government.

(h) The Government may waive the requirement for first article approval test where supplies identical or similar to those called for in the schedule have been previously furnished by the offeror/contractor and have been accepted by the Government. The offeror/contractor may request a waiver.

WAIVER OF FIRST ARTICLE REQUIREMENTS (NAVSEA) (SEP 1990)(5417)

If the First Article is waived by the Government, the Contractor shall deliver supplies that are identical or substantially identical to those previously accepted by the Government under the following contract(s):

Contract(s) _____

(Offeror to fill in contract number(s), as applicable. See Section M)

ORDERING (OCT 1995) (FAR 52.216-18)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from EFFECTIVE DATE OF CONTRACT through 3 YEARS FROM EFFECTIVE DATE OF CONTRACT.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

ORDER LIMITATIONS (OCT 1995) (FAR 52.216-19)

(a) Minimum Order. When the Government requires supplies or services covered by this contract in an amount of less

than 1 EACH, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum Order. The Contractor is not obligated to honor--

(1) Any order for a single item in excess of 1,000 EACH

(2) Any order for a combination of items in excess of 1,000 EACH ;

or

(3) A series of orders from the same ordering office within 1,095 days that together call for quantities

05 June 2001

exceeding the limitation in subparagraph (1) or (2) of this section.

(c) If this is a requirement contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 14 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for the reasons. Upon receiving this notice, the Government may acquire the supplies or service from another source.

INDEFINITE QUANTITY (OCT 1995) (FAR 52.216-22)

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum". The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."

(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after The required delivery schedule established in any order issued within the ordering period of 3 years from effective date of contract.

NOTIFICATION OF COMPETITION LIMITED TO ELIGIBLE 8(A) CONCERNS (NOV 1999) (FAR 52.219-18) DFARS 252.219-7010 ALTERNATE A (JUNE 1998)

(a) Offers are solicited only from small business concerns expressly certified by the Small Business Administration (SBA) for participation in the SBA's 8(a) Program and which meet the following criteria at the time of submission of offer --

[]
([1]) The Offeror is in conformance with the 8(a) support limitation set forth in its approved business plan; and

([2]) The Offeror is in conformance with the Business Activity Targets set forth in its approved business plan or any remedial action directed by the SBA.

(b) By submission of its offer, the Offeror represents that it meets all of the criteria set forth in paragraph (a) of this clause.

(c) Any award resulting from this solicitation will be directly by the Contracting Officer to the successful 8(a) offeror selected through the evaluation criteria set forth in this solicitation.

(d)

(1) *Agreement.* A small business concern submitting an offer in its own name agrees to furnish, in performing the contract, only end items manufactured or produced by small business concerns in the United States. The term "United States" includes its territories and possessions, the Commonwealth of Puerto Rico, the trust territory of the Pacific Islands, and the District of Columbia. If this procurement is processed under simplified acquisition procedures and the total amount of this contract does not exceed \$25,000, a small business concern may furnish the product of any domestic firm. This subparagraph does not apply in connection with construction or service contracts.

(2) The _____ *[insert name of SBA's contractor]* will notify the **_listed in block 7 on page 1** Contracting Officer in writing immediately upon entering an agreement (either oral or written) to transfer all or part of its stock or other ownership interest to any other party.

(End of Clause)

PROHIBITION OF SEGREGATED FACILITIES (52.222-21) (FEB 1999)

(a) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms and necessary dressing or sleeping areas, which shall be provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997)(FAR 52.223-3)

(a) "*Hazardous material*," as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract).

(b) The offeror must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

PS/01/8855/002
05 June 2001

| Material (If none, insert "None") | Identification No. |
|--------------------------------------|--------------------|
| | |
| | |
| | |
| | |

(c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.

(d) The apparently successful offeror agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsible and ineligible for award.

(e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

(f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to --

(i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;

(ii) Obtain medical treatment for those affected by the material; and

(iii) Have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.

(3) The Government is not precluded from using similar or identical data acquired from other sources.

(End of Clause)

HAZARD WARNING LABELS (DEC 1991) (DFAR 252.223-7001)

(a) "Hazardous material," as used in this clause, is defined in the Hazardous Material Identification and Material Safety Data clause of this contract.

(b) The Contractor shall label the item package (unit container) of any hazardous material to be delivered under this contract in accordance with the Hazard Communication Standard (29 CFR

PS/01/8855/002

05 June 2001

1910.1200 et seq). The Standard requires that the hazard warning label conform to the requirements of the standard unless the material is otherwise subject to the labeling requirements of one of the following statutes:

- (1) Federal Insecticide, Fungicide and Rodenticide Act;
- (2) Federal Food, Drug and Cosmetics Act;
- (3) Consumer Product Safety Act;
- (4) Federal Hazardous Substances Act; or
- (5) Federal Alcohol Administration Act.

(c) The Offeror shall list which hazardous material listed in the Hazardous Material Identification and Material Safety Data clause of this contract will be labeled in accordance with one of the Acts in paragraphs (b)(1) through (5) of this clause instead of the Hazard Communication Standard. Any hazardous material not listed will be interpreted to mean that a label is required in accordance with the Hazard Communication Standard.

MATERIAL
(If None, Insert "None")

ACT

(d) The apparently successful Offeror agrees to submit, before award, a copy of the hazard warning label for all hazardous materials not listed in paragraph (c) of this clause. The Offeror shall submit the label with the Material Safety Data Sheet being furnished under the Hazardous Material Identification and Material Safety Data clause of this contract.

(e) The Contractor shall also comply with MIL-STD-129, Marking for Shipment and Storage (including revisions adopted during the term of this contract).

HAZARDOUS MATERIALS (6002)

(a) Packaging, Packing, Marking and Labeling Hazardous materials to be shipped by any mode or combination of transportation modes shall be prepared (properly classed, described, packaged, marked, labeled, transport vehicle placarded, etc.) for shipment in accordance with MIL-STD-129 and all applicable government and carrier regulations in effect at time of shipment.

(b) In the event of a conflict between specific requirements in the contract or order and existing applicable regulations, the regulations take precedence. Under no circumstances shall the contractor knowingly use materials, markings or procedures which are not in accordance with laws and regulations applicable to the mode of transportation employed.

TYPE OF SHIPMENT

APPLICABLE REGULATIONS

1. Domestic
2. Domestic Air Commercial
3. Domestic Air Military
- *4. Export Surface
- *5. Export Air Commercial
- *6. Export Air Military (MAC)

A
A, B, C
A, F
A, E, G
A, D, G
F, G

LIST OF REGULATIONS

PS/01/8855/002

05 June 2001

- A. Code of Federal Regulations Title: 49 Transportation Parts 100-199
- B. Official Air Transport Restricted Articles Tariff No. 6-D C.A.B. 82
- C. Official Air Transport Restricted Articles Circular No. 6-D
- D. International Air Transport Association Restricted Articles Regulations
- E. International Maritime Dangerous Goods Code
- F. Air Force Regulation 71-4 Preparation of Hazardous Materials for Military Shipment
- *G. Export shipments are also subject to the domestic regulations indicated to the port of embarkation.

NOTICE: FIRST ARTICLE AS MANUFACTURING STANDARD (6009)

Each first article approved under this contract shall serve as a manufacturing standard for the corresponding production items delivered hereunder.

NOTICE OF RADIOACTIVE MATERIALS (JAN 1997) (FAR 52.223-7)

(a) The Contractor shall notify the Contracting Officer or designee, in writing, 7 days prior to the delivery of, or prior to completion of any servicing required by this contract of, items containing either (1) radioactive material requiring specific licensing under the regulations issued pursuant to the Atomic Energy Act of 1954, as amended, as set forth in Title 10 of the Code of Federal Regulations, in effect on the date of this contract, or (2) other radioactive material not requiring specific licensing in which the specific activity is greater than 0.002 microcuries per gram or the activity per item equals or exceeds 0.01 microcuries. Such notice shall specify the part or parts of the items which contain radioactive materials, a description of the materials, the name and activity of the isotope, the manufacturer of the materials, and any other information known to the Contractor which will put users of the items on notice as to the hazards involved (OMB No. 9000-0107).

(b) If there has been no change affecting the quantity of activity, or the characteristics and composition of the radioactive material from deliveries under this contract or prior contracts, the Contractor may request that the Contracting Officer or designee waive the notice requirement in paragraph (a) of this clause. Any such request shall--

(1) Be submitted in writing;

(2) State that the quantity of activity, characteristics, and composition of the radioactive material have not changed; and

(3) Cite the contract number on which the prior notification was submitted and the contracting office to which it was submitted.

(c) All items, parts, or subassemblies which contain radioactive materials in which the specific activity is greater than 0.002 microcuries per gram or activity per item equals or exceeds 0.01 microcuries, and all containers in which such items, parts or subassemblies are delivered to the Government shall be clearly marked and labeled as required by the latest revision of MIL-STD-129 in effect on the date of the contract.

(d) This clause, including this paragraph (d), shall be inserted in all subcontracts for radioactive materials meeting the criteria in paragraph (a) of this clause.

VALUE ENGINEERING (FEB 2000) (FAR 52.248-1)

As prescribed in 48.201, insert the following clause:

05 June 2001

(a) *General.* The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any net acquisition savings realized from accepted VECP's, in accordance with the incentive sharing rates in paragraph (f) below.

(b) *Definitions.*

"Acquisition savings," as used in this clause, means savings resulting from the application of a VECP to contracts awarded by the same contracting office or its successor for essentially the same unit. Acquisition savings include --

- (1) Instant contract savings, which are the net cost reductions on this, the instant contract, and which are equal to the instant unit cost reduction multiplied by the number of instant contract units affected by the VECP, less the Contractor's allowable development and implementation costs;
- (2) Concurrent contract savings, which are net reductions in the prices of other contracts that are definitized and ongoing at the time the VECP is accepted; and
- (3) Future contract savings, which are the product of the future unit cost reduction multiplied by the number of future contract units in the sharing base. On an instant contract, future contract savings include savings on increases in quantities after VECP acceptance that are due to contract modifications, exercise of options, additional orders, and funding of subsequent year requirements on a multiyear contract.

"Collateral costs," as used in this clause, means agency cost of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contracting office" includes any contracting office that the acquisition is transferred to, such as another branch of the agency or another agency's office that is performing a joint acquisition action.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Future unit cost reduction," as used in this clause, means the instant unit cost reduction adjusted as the Contracting Officer considers necessary for projected learning or changes in quantity during the sharing period. It is calculated at the time the VECP is accepted and applies either --

- (1) Throughout the sharing period, unless the Contracting Officer decides that recalculation is necessary because conditions are significantly different from those previously anticipated; or
- (2) To the calculation of a lump-sum payment, which cannot later be revised.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistics support. The term does not include the normal administrative costs of processing the VECP or any increase in this contract's cost or price resulting from negative instant contract savings.

"Instant contract," as used in this clause, means this contract, under which the VECP is submitted. It does not include increases in quantities after acceptance of the VECP that are due to contract modifications, exercise of options, or additional orders. If this is a multiyear contract, the term does not include quantities funded after VECP acceptance. If this contract is a fixed-price contract with prospective price redetermination, the term refers to the period for which firm prices have been established.

"Instant unit cost reduction" means the amount of the decrease in unit cost of performance (without

05 June 2001

deducting any Contractor's development or implementation costs) resulting from using the VECP on this, the instant contract. If this is a service contract, the instant unit cost reduction is normally equal to the number of hours per line-item task saved by using the VECP on this contract, multiplied by the appropriate contract labor rate.

"Negative instant contract savings" means the increase in the cost or price of this contract when the acceptance of a VECP results in an excess of the Contractor's allowable development and implementation costs over the product of the instant unit cost reduction multiplied by the number of instant contract units affected.

"Net acquisition savings" means total acquisition savings, including instant, concurrent, and future contract savings, less Government costs.

"Sharing base," as used in this clause, means the number of affected end items on contracts of the contracting office accepting the VECP.

"Sharing period," as used in this clause, means the period beginning with acceptance of the first unit incorporating the VECP and ending at a calendar date or event determined by the contracting officer for each VECP.

"Unit," as used in this clause, means the item or task to which the Contracting Officer and the Contractor agree the VECP applies.

"Value engineering change proposal (VECP)" means a proposal that --

- (1) Requires a change to this, the instant contract, to implement; and
- (2) Results in reducing the overall projected cost to the agency without impairing essential functions or characteristics; provided, that it does not involve a change --
 - (i) In deliverable end item quantities only;
 - (ii) In research and development (R&D) end items or R&D test quantities that is due solely to results of previous testing under this contract; or
 - (iii) To the contract type only.

(c) *VECP preparation.* As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (c)(1) through (8) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation.

The VECP shall include the following:

- (1) A description of the difference between the existing contract requirement and the proposed requirement, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, the effect of the change on the end item's performance, and any pertinent objective test data.
- (2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.
- (3) Identification of the unit to which the VECP applies.
- (4) A separate, detailed cost estimate for
 - (i) the affected portions of the existing contract requirement and
 - (ii) the VECP.

The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under the Subcontracts paragraph of this clause, below.

- (5) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.
- (6) A prediction of any effects the proposed change would have on collateral costs to the agency.

05 June 2001

(7) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(8) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) *Submission.* The Contractor shall submit VECP's to the Contracting Officer, unless this contract states otherwise. If this contract is administered by other than the contracting office, the Contractor shall submit a copy of the VECP simultaneously to the Contracting Officer and to the Administrative Contracting Officer.

(e) *Government action.*

(1) The Contracting Officer **[will]** notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer **[will]** notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it **[will]** not be liable for any delay in acting upon a VECP.

(2) If the VECP is not accepted, the Contracting Officer **[will]** notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

(3) Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause and made either before or within a reasonable time after contract performance is completed. Until such a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The [] decision to accept or reject all or part of any VECP **[is a unilateral decision made solely at the discretion of the Contracting Officer.]**

(f) *Sharing rates.* If a VECP is accepted, the Contractor shall share in net acquisition savings according to the percentages shown in the table below. The percentage paid the Contractor depends upon --

(1) This contract's type (fixed-price, incentive, or cost-reimbursement);

(2) The sharing arrangement specified in paragraph (a) above (incentive, program requirement, or a combination as delineated in the Schedule); and

(3) The source of the savings (the instant contract, or concurrent and future contracts), as follows:

CONTRACTOR'S SHARE OF NET ACQUISITION SAVINGS

(Figures in percent)

Contract Type

Incentive (Voluntary)

Program Requirement
(Mandatory)

PS/01/8855/002

05 June 2001

| | Instant Contract Rate | Concurrent and Future Contract Rate | Instant Contract Rate | Concurrent and Future Contract Rate |
|---|--------------------------|--|--------------------------|--|
| Fixed-price (includes fixed-price-award-fee; excludes other fixed-price incentive contracts) | (1) 50 | (1) 50 | (1) 25 | 25 |
| Incentive (fixed-price or cost) (other than award fee) | (2) | (1) 50 | (2) | 25 |
| Cost-reimbursement (includes cost-plus-award-fee; excludes other cost-type incentive Contracts) | (3) 25 | (3) 25 | 15 | 15 |

(1) The Contracting Officer may increase the Contractor's sharing rate to as high as 75 percent for each VECP.

(2) Same sharing arrangement as the contract's profit or fee adjustment formula.

(3) The Contracting Officer may increase the Contractor's sharing rate to as high as 50 percent for each VECP.

(g) *Calculating net acquisition savings.*

(1) Acquisition savings are realized when

- (i) the cost or price is reduced on the instant contract,
- (ii) reductions are negotiated in concurrent contracts,
- (iii) future contracts are awarded, or
- (iv) agreement is reached on a lump-sum payment for future contract savings (see subparagraph (i)(4) below).

Net acquisition savings are first realized, and the Contractor shall be paid a share, when Government costs and any negative instant contract savings have been fully offset against acquisition savings.

(2) Except in incentive contracts, Government costs and any price or cost increases resulting from negative instant contract savings shall be offset against acquisition savings each time such savings are realized until they are fully offset. Then, the Contractor's share is calculated by multiplying net acquisition savings by the appropriate Contractor's percentage sharing rate (see paragraph (f) above). Additional Contractor shares of net acquisition savings shall be paid to the Contractor at the time realized.

(3) If this is an incentive contract, recovery of Government costs on the instant contract shall be deferred and offset against concurrent and future contract savings. The Contractor shall share through the contract incentive structure in savings on the instant contract items affected. Any

05 June 2001

negative instant contract savings shall be added to the target cost or to the target price and ceiling price, and the amount shall be offset against concurrent and future contract savings.

(4) If the Government does not receive and accept all items on which it paid the Contractor's share, the Contractor shall reimburse the Government for the proportionate share of these payments.

(h) *Contract adjustment.* The modification accepting the VECP (or a subsequent modification issued as soon as possible after any negotiations are completed) shall --

(1) Reduce the contract price or estimated cost by the amount of instant contract savings, unless this is an incentive contract;

(2) When the amount of instant contract savings is negative, increase the contract price, target price and ceiling price, target cost, or estimated cost by that amount;

(3) Specify the Contractor's dollar share per unit on future contracts, or provide the lump-sum payment;

(4) Specify the amount of any Government costs or negative instant contract savings to be offset in determining net acquisition savings realized from concurrent or future contract savings; and

(5) Provide the Contractor's share of any net acquisition savings under the instant contract in accordance with the following:

(i) Fixed-price contracts -- add to contract price.

(ii) Cost-reimbursement contracts -- add to contract fee.

(i) *Concurrent and future contract savings.*

(1) Payments of the Contractor's share of concurrent and future contract savings shall be made by a modification to the instant contract in accordance with subparagraph (h)(5) above. For incentive contracts, shares shall be added as a separate firm-fixed-price line item on the instant contract. The Contractor shall maintain records adequate to identify the first delivered unit for 3 years after final payment under this contract.

(2) The Contracting Officer shall calculate the Contractor's share of concurrent contract savings by -

(i) Subtracting from the reduction in price negotiated on the concurrent contract any Government costs or negative instant contract savings not yet offset; and

(ii) Multiplying the result by the Contractor's sharing rate.

(3) The Contracting Officer shall calculate the Contractor's share of future contract savings by --

(i) Multiplying the future unit cost reduction by the number of future contract units scheduled for delivery during the sharing period;

(ii) Subtracting any Government costs or negative instant contract savings not yet offset; and

(iii) Multiplying the result by the Contractor's sharing rate.

(4) When the Government wishes and the Contractor agrees, the Contractor's share of future contract savings may be paid in a single lump sum rather than in a series of payments over time as future contracts are awarded. Under this alternate procedure, the future contract savings may be calculated when the VECP is accepted, on the basis of the Contracting Officer's forecast of the number of units that will be delivered during the sharing period. The Contractor's share shall be included in a modification to this contract (see subparagraph (h)(3) above) and shall not be subject to subsequent adjustment.

(5) *Alternate no-cost settlement method.* When, in accordance with subsection 48.104-4 of the Federal Acquisition Regulation, the Government and the Contractor mutually agree to use the no-cost settlement method, the following applies:

(i) The Contractor will keep all the savings on the instant contract and on its concurrent

contracts only.

(ii) The Government will keep all the savings resulting from concurrent contracts placed on other sources, savings from all future contracts, and all collateral savings.

(j) *Collateral savings*. If a VECP is accepted, **[the Contracting Officer will increase]** the instant contract amount[], as specified in paragraph (h)(5) of this clause, by a rate from 20 to 100 percent, as determined by the Contracting Officer, of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings **[will]** not exceed[] the contract's firm-fixed-price, target price, target cost, or estimated cost, at the time the VECP is accepted, or [] \$100,000, whichever is greater. The Contracting Officer **[will]** be the sole determiner of the amount of collateral savings[].

(k) *Relationship to other incentives*. Only those benefits of an accepted VECP not rewardable under performance, design-to-cost (production unit cost, operating and support costs, reliability and maintainability), or similar incentives shall be rewarded under this clause. However, the targets of such incentives affected by the VECP shall not be adjusted because of VECP acceptance. If this contract specifies targets but provides no incentive to surpass them, the value engineering sharing shall apply only to the amount of achievement better than target.

(l) *Subcontracts*. The Contractor shall include an appropriate value engineering clause in any subcontract of \$100,000 or more and may include one in subcontracts of lesser value. In calculating any adjustment in this contract's price for instant contract savings (or negative instant contract savings), the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs, and any value engineering incentive payments to a subcontractor, clearly resulting from a VECP accepted by the Government under this contract. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that the payments shall not reduce the Government's share of concurrent or future contract savings or collateral savings.

(m) *Data*. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

These data, furnished under the Value Engineering clause of contract _____, shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations.

If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of Clause)

PS/01/8855/002
05 June 2001

CLAUSES INCORPORATED BY REFERENCE (FEB 1998) (52.252-2)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these addresses*(es):
<http://www.arnet.gov/far>

**SUBSTITUTIONS FOR MILITARY OR FEDERAL SPECIFICATIONS AND STANDARDS (AUG 2000)
(DFARS 252.211-7005)**

- (a) * * * Under SPI, these processes are reviewed and accepted by a Management Council, which includes representatives of the Contractor, the Defense Contract Management Agency, the Defense Contract Audit Agency, and the military departments.
- (b) Offerors are encouraged to propose SPI processes in lieu of military or Federal specifications and standards cited in the solicitation. A listing of SPI processes accepted at specific facilities is available via the Internet in PDF format at http://www.dcmc.hq.dla.mil/dcmc_o/oc/spi/files/dbreport/files/modified.pdf and in Excel format at http://www.dcmc.hq.dla.mil/dcmc_o/oc/spi/files/dbreport/files/modified.xls.

SECTION 8(a) DIRECT AWARD (JUN 1998) (252.219-7009)

- (a) This contract is issued as a direct award between the contracting office and the 8(a) Contractor pursuant to the Memorandum of Understanding dated May 6, 1998, between the Small Business Administration (SBA) and the Department of Defense. Accordingly, the SBA is not a party to this contract. SBA does retain responsibility for 8(a) certification, for 8(a) eligibility determinations and related issues, and for providing counseling and assistance to the 8(a) Contractor under the 8(a) Program. The cognizant SBA district office is:

*[To be completed by the Contracting Officer
at the time of award]*

- (b) The contracting office is responsible for administering the contract and for taking any action on behalf of the Government under the terms and conditions of the contract; provided that the contracting office shall give advance notice to the SBA before it issues a final notice terminating performance, either in whole or in part, under the contract. The contracting office also shall coordinate with the SBA prior to processing any novation agreement. The contracting office may assign contract administration functions to a contract administration office.

- (c) The Contractor agrees that-

- (1) It will notify the Contracting Officer, simultaneous with its notification to the SBA (as required by SBA's 8(a) regulations at 13 CFR 124.308), when the owner or owners upon whom 8(a) eligibility is based plan to relinquish ownership or control of the concern. Consistent with Section 407 of Pub. L. 100-656, transfer of ownership or control shall result in

PS/01/8855/002

05 June 2001

termination of the contract for convenience, unless the SBA waives the requirement for termination prior to the actual relinquishing of ownership and control; and

(2) It will not subcontract the performance of any of the requirements of this contract without the prior written approval of the SBA and the Contracting Officer.

(End of clause)

RIGHTS IN TECHNICAL DATA--NONCOMMERCIAL ITEMS (NOV 1995) (DFAR 252.227-7013 (Alt I))

(a) Definitions. As used in this clause:

(1) "Computer data base" means a collection of data recorded in a form capable of being processed by a computer. The term does not include computer software.

(2) "Computer program" means a set of instructions, rules, or routines recorded in a form that is capable of causing a computer to perform a specific operation or series of operations.

(3) "Computer software" means computer programs, source code, source code listings, object code listings, design details, algorithms, processes, flow charts, formulae and related material that would enable the software to be reproduced, recreated, or recompiled. Computer software does not include computer data bases or computer software documentation.

(4) "Computer software documentation" means owner's manuals, user's manuals, installation instructions, operating instructions, and other similar items, regardless of storage medium, that explain the capabilities of the computer software or provide instructions for using the software.

(5) "Detailed manufacturing or process data" means technical data that describe the steps, sequences, and conditions of manufacturing, processing or assembly used by the manufacturer to produce an item or component or to perform a process.

(6) "Developed" means that an item, component, or process exists and is workable. Thus, the item or component must have been constructed or the process practiced. Workability is generally established when the item, component, or process has been analyzed or tested sufficiently to demonstrate to reasonable people skilled in the applicable art that there is a high probability that it will operate as intended. Whether, how much, and what type of analysis or testing is required to establish workability depends on the nature of the item, component, or process, and the state of the art. To be considered "developed," the item, component, or process need not be at the stage where it could be offered for sale or sold on the commercial market, nor must the item, component, or process be actually reduced to practice within the meaning of Title 35 of the United States Code.

(7) "Developed exclusively at private expense" means development was accomplished entirely with costs charged to indirect cost pools, costs not allocated to a government contract, or any combination thereof.

(i) Private expense determinations should be made at the lowest practicable level.

(ii) Under fixed-price contracts, when total costs are greater than the firm-fixed-price or ceiling price of the contract, the additional development costs necessary to complete development shall not be considered when determining whether development was at government, private, or mixed expense.

(8) "Developed exclusively with government funds" means development was not accomplished exclusively or partially at private expense.

(9) "Developed with mixed funding" means development was accomplished partially with costs charged to indirect cost pools and/or costs not allocated to a government contract, and partially with costs charged directly to a government contract.

(10) "Form, fit, and function data" means technical data that describes the required overall

05 June 2001

physical, functional, and performance characteristics (along with the qualification requirements, if applicable) of an item, component, or process to the extent necessary to permit identification of physically and functionally interchangeable items.

(11) "Government purpose" means any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations, or sales or transfers by the United States Government to foreign governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data for commercial purposes or authorize others to do so.

(12) "Government purpose rights" means the rights to-

(i) Use, modify, reproduce, release, perform, display, or disclose technical data within the Government without restriction; and

(ii) Release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes.

(13) "Limited rights" means the rights to use, modify, reproduce, release, perform, display, or disclose technical data, in whole or in part, within the Government. The Government may not, without the written permission of the party asserting limited rights, release or disclose the technical data outside the Government, use the technical data for manufacture, or authorize the technical data to be used by another party, except that the Government may reproduce, release or disclose such data or authorize the use or reproduction of the data by persons outside the Government if reproduction, release, disclosure, or use is-

(i) Necessary for emergency repair and overhaul; or

(ii) A release or disclosure of technical data (other than detailed manufacturing or process data) to, or use of such data by, a foreign government that is in the interest of the Government and is required for evaluational or informational purposes;

(iii) Subject to a prohibition on the further reproduction, release, disclosure, or use of the technical data; and

(iv) The contractor or subcontractor asserting the restriction is notified of such reproduction, release, disclosure, or use.

(14) "Technical data" means recorded information, regardless of the form or method of the recording, of a scientific or technical nature (including computer software documentation). The term does not include computer software or data incidental to contract administration, such as financial and/or management information.

(15) "Unlimited rights" means rights to use, modify, reproduce, perform, display, release, or disclose technical data in whole or in part, in any manner, and for any purpose whatsoever, and to have or authorize others to do so.

(b) Rights in technical data. The Contractor grants or shall obtain for the Government the following royalty free, world-wide, nonexclusive, irrevocable license rights in technical data other than computer software documentation (see the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause of this contract for rights in computer software documentation):

(1) Unlimited rights. The Government shall have unlimited rights in technical data that are-

(i) Data pertaining to an item, component, or process which has been or will be developed exclusively with Government funds;

(ii) Studies, analyses, test data, or similar data produced for this contract, when the study,

05 June 2001

analysis, test, or similar work was specified as an element of performance;

(iii) Created exclusively with Government funds in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes;

(iv) Form, fit, and function data;

(v) Necessary for installation, operation, maintenance, or training purposes (other than detailed manufacturing or process data);

(vi) Corrections or changes to technical data furnished to the Contractor by the Government;

(vii) Otherwise publicly available or have been released or disclosed by the Contractor or subcontractor without restrictions on further use, release or disclosure, other than a release or disclosure resulting from the sale, transfer, or other assignment of interest in the technical data to another party or the sale or transfer of some or all of a business entity or its assets to another party;

(viii) Data in which the Government has obtained unlimited rights under another Government contract or as a result of negotiations; or

(ix) Data furnished to the Government, under this or any other Government contract or subcontract thereunder, with-

(A) Government purpose license rights or limited rights and the restrictive condition(s) has/have expired; or

(B) Government purpose rights and the Contractor's exclusive right to use such data for commercial purposes has expired.

(2) Government purpose rights.

(i) The Government shall have government purpose rights for a five-year period, or such other period as may be negotiated, in technical data-

(A) That pertain to items, components, or processes developed with mixed funding except when the Government is entitled to unlimited rights in such data as provided in paragraphs (b)(ii) and (b)(iv) through (b)(ix) of this clause; or

(B) Created with mixed funding in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes.

(ii) The five-year period, or such other period as may have been negotiated, shall commence upon execution of the contract, subcontract, letter contract (or similar contractual instrument), contract modification, or option exercise that required development of the items, components, or processes or creation of the data described in paragraph (b)(2)(i)(B) of this clause. Upon expiration of the five-year or other negotiated period, the Government shall have unlimited rights in the technical data.

(iii) The Government shall not release or disclose technical data in which it has government purpose rights unless-

(A) Prior to release or disclosure, the intended recipient is subject to the non-disclosure agreement at 227.7103-7 of the Defense Federal Acquisition Regulation Supplement (DFARS); or

(B) The recipient is a Government contractor receiving access to the data for performance of a Government contract that contains the clause at DFARS 252.227-7025, Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends.

(iv) The Contractor has the exclusive right, including the right to license others, to use technical data in which the Government has obtained government purpose rights under this contract for any commercial purpose during the time period specified in the government purpose rights legend prescribed in paragraph (f)(2) of this clause.

(3) Limited rights.

(i) Except as provided in paragraphs (b)(1)(ii) and (b)(1)(iv) through (b)(1)(ix) of this clause, the Government shall have limited rights in technical data-

05 June 2001

(A) Pertaining to items, components, or processes developed exclusively at private expense and marked with the limited rights legend prescribed in paragraph (f) of this clause; or

(B) Created exclusively at private expense in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes.

(ii) The Government shall require a recipient of limited rights data for emergency repair or overhaul to destroy the data and all copies in its possession promptly following completion of the emergency repair/overhaul and to notify the Contractor that the data have been destroyed.

(iii) The Contractor, its subcontractors, and suppliers are not required to provide the Government additional rights to use, modify, reproduce, release, perform, display, or disclose technical data furnished to the Government with limited rights. However, if the Government desires to obtain additional rights in technical data in which it has limited rights, the Contractor agrees to promptly enter into negotiations with the Contracting Officer to determine whether there are acceptable terms for transferring such rights. All technical data in which the Contractor has granted the Government additional rights shall be listed or described in a license agreement made part of the contract. The license shall enumerate the additional rights granted the Government in such data.

(4) Specifically negotiated license rights. The standard license rights granted to the Government under paragraphs (b)(1) through (b)(3) of this clause, including the period during which the Government shall have government purpose rights in technical data, may be modified by mutual agreement to provide such rights as the parties consider appropriate but shall not provide the Government lesser rights than are enumerated in paragraph (a)(13) of this clause. Any rights so negotiated shall be identified in a license agreement made part of this contract.

(5) Prior government rights. Technical data that will be delivered, furnished, or otherwise provided to the Government under this contract, in which the Government has previously obtained rights shall be delivered, furnished, or provided with the pre-existing rights, unless-

(i) The parties have agreed otherwise; or

(ii) Any restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose the data have expired or no longer apply.

(6) Release from liability. The Contractor agrees to release the Government from liability for any release or disclosure of technical data made in accordance with paragraph (a)(13) or (b)(2)(iii) of this clause, in accordance with the terms of a license negotiated under paragraph (b)(4) of this clause, or by others to whom the recipient has released or disclosed the data and to seek relief solely from the party who has improperly used, modified, reproduced, released, performed, displayed, or disclosed Contractor data marked with restrictive legends.

(c) Contractor rights in technical data. All rights not granted to the Government are retained by the Contractor.

(d) Third party copyrighted data. The Contractor shall not, without the written approval of the Contracting Officer, incorporate any copyrighted data in the technical data to be delivered under this contract unless the Contractor is the copyright owner or has obtained for the Government the license rights necessary to perfect a license or licenses in the deliverable data of the appropriate scope set forth in paragraph (b) of this clause, and has affixed a statement of the license or licenses obtained on behalf of the Government and other persons to the data transmittal document.

(e) Identification and delivery of data to be furnished with restrictions on use, release, or disclosure.

(1) This paragraph does not apply to restrictions based solely on copyright.

(2) Except as provided in paragraph (e)(3) of this clause, technical data that the Contractor asserts should be furnished to the Government with restrictions on use, release, or disclosure are

PS/01/8855/002

05 June 2001

identified in an attachment to this contract (the Attachment). The Contractor shall not deliver any data with restrictive markings unless the data are listed on the Attachment.

(3) In addition to the assertions made in the Attachment, other assertions may be identified after award when based on new information or inadvertent omissions unless the inadvertent omissions would have materially affected the source selection decision. Such identification and assertion shall be submitted to the Contracting Officer as soon as practicable prior to the scheduled date for delivery of the data, in the following format, and signed by an official authorized to contractually obligate the Contractor:

Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data.

The Contractor asserts for itself, or the persons identified below, that the Government' rights to use, release, or disclose the following technical data should be restricted-

| Technical Data to be Furnished With Restrictions | Basis for Assertion | Asserted Rights Category | Name of Person Asserting Restrictions |
|--|---------------------|-----------------------------|--|
| List * | List** | List*** | List**** |

*If the assertion is applicable to items, components, or processes developed at private expense, identify both the data and each such item, component, or process.

**Generally, the development of an item, component, or process at private expense, either exclusively or partially, is the only basis for asserting restrictions on the Government's rights to use, release, or disclose technical data pertaining to such items, components, or processes. Indicate whether development was exclusively or partially at private expense. If development was not at private expense, enter the specific reason for asserting that the Government's rights should be restricted.

***Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited or government purpose rights under this or a prior contract, or specifically negotiated licenses).

****Corporation, individual, or other person, as appropriate.

Date

Printed Name and Title

Signature

(End of identification and assertion)

(4) When requested by the Contracting Officer, the Contractor shall provide sufficient information to enable the Contracting Officer to evaluate the Contractor's assertions. The Contracting Officer reserves the right to add the Contractor's assertions to the Attachment and validate any listed assertion, at a later date, in accordance with the procedures of the Validation of Restrictive Markings on Technical Data clause of this contract.

(f) Marking requirements. The Contractor, and its subcontractors or suppliers, may only assert

PS/01/8855/002

05 June 2001

restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data to be delivered under this contract by marking the deliverable data subject to restriction. Except as provided in paragraph (f)(5) of this clause, only the following legends are authorized under this contract: the government purpose rights legend at paragraph (f)(2) of this clause; the limited rights legend at paragraph (f)(3) of this clause; or the special license rights legend at paragraph (f)(4) of this clause; and/or a notice of copyright as prescribed under 17 U.S.C. 401 or 402.

(1) General marking instructions. The Contractor, or its subcontractors or suppliers, shall conspicuously and legibly mark the appropriate legend on all technical data that qualify for such markings. The authorized legends shall be placed on the transmittal document or storage container and, for printed material, each page of the printed material containing technical data for which restrictions are asserted. When only portions of a page of printed material are subject to the asserted restrictions, such portions shall be identified by circling, underscoring, with a note, or other appropriate identifier. Technical data transmitted directly from one computer or computer terminal to another shall contain a notice of asserted restrictions. Reproductions of technical data or any portions thereof subject to asserted restrictions shall also reproduce the asserted restrictions.

(2) Government purpose rights markings. Data delivered or otherwise furnished to the Government with government purpose rights shall be marked as follows:

GOVERNMENT PURPOSE RIGHTS

Contract No.

Contractor Name

Contractor Address

Expiration Date

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these technical data are restricted by paragraph (b)(2) of the Rights in Technical Data-Noncommercial Items clause contained in the above identified contract. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(3) Limited rights markings. Data delivered or otherwise furnished to the Government with limited rights shall be marked with the following legend:

LIMITED RIGHTS

Contract No.

Contractor Name

Contractor Address

PS/01/8855/002

05 June 2001

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these technical data are restricted by paragraph (b)(3) of the Rights in Technical Data--Noncommercial Items clause contained in the above identified contract. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. Any person, other than the Government, who has been provided access to such data must promptly notify the above named Contractor.

(End of legend)

(4) Special license rights markings.

(i) Data in which the Government's rights stem from a specifically negotiated license shall be marked with the following legend:

SPECIAL LICENSE RIGHTS

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these data are restricted by Contract No. _____(Insert contract number)____, License No. _____(Insert license identifier)____. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(ii) For purposes of this clause, special licenses do not include government purpose license rights acquired under a prior contract (see paragraph (b)(5) of this clause).

(5) Pre-existing data markings. If the terms of a prior contract or license permitted the Contractor to restrict the Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data deliverable under this contract, and those restrictions are still applicable, the Contractor may mark such data with the appropriate restrictive legend for which the data qualified under the prior contract or license. The marking procedures in paragraph

(f)(1) of this clause shall be followed.

(g) Contractor procedures and records. Throughout performance of this contract, the Contractor and its subcontractors or suppliers that will deliver technical data with other than unlimited rights, shall-

(1) Have, maintain, and follow written procedures sufficient to assure that restrictive markings are used only when authorized by the terms of this clause; and

(2) Maintain records sufficient to justify the validity of any restrictive markings on technical data delivered under this contract.

(h) Removal of unjustified and nonconforming markings.

(1) Unjustified technical data markings. The rights and obligations of the parties regarding the validation of restrictive markings on technical data furnished or to be furnished under this contract are contained in the Validation of Restrictive Markings on Technical Data clause of this contract. Notwithstanding any provision of this contract concerning inspection and acceptance, the Government may ignore or, at the Contractor's expense, correct or strike a marking if, in accordance with the procedures in the Validation of Restrictive Markings on Technical Data clause of this contract, a restrictive marking is determined to be unjustified.

(2) Nonconforming technical data markings. A nonconforming marking is a marking placed on technical data delivered or otherwise furnished to the Government under this contract that is not in the format authorized by this contract. Correction of nonconforming markings is not subject to the Validation of Restrictive Markings on Technical Data clause of this contract. If the Contracting Officer notifies the

05 June 2001

Contractor of a nonconforming marking and the Contractor fails to remove or correct such marking within sixty (60) days, the Government may ignore or, at the Contractor's expense, remove or correct any nonconforming marking.

(i) Relation to patents. Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government under any patent.

(j) Limitation on charges for rights in technical data.

(1) The Contractor shall not charge to this contract any cost, including, but not limited to, license fees, royalties, or similar charges, for rights in technical data to be delivered under this contract when-

(i) The Government has acquired, by any means, the same or greater rights in the data; or

(ii) The data are available to the public without restrictions.

(2) The limitation in paragraph (j)(1) of this clause-

(i) Includes costs charged by a subcontractor or supplier, at any tier, or costs incurred by the Contractor to acquire rights in subcontractor or supplier technical data, if the subcontractor or supplier has been paid for such rights under any other Government contract or under a license conveying the rights to the Government; and

(ii) Does not include the reasonable costs of reproducing, handling, or mailing the documents or other media in which the technical data will be delivered.

(k) Applicability to subcontractors or suppliers.

(1) The Contractor shall ensure that the rights afforded its subcontractors and suppliers under 10 U.S.C. 2320, 10 U.S.C. 2321, and the identification, assertion, and delivery processes of paragraph (e) of this clause are recognized and protected.

(2) Whenever any technical data for noncommercial items is to be obtained from a subcontractor or supplier for delivery to the Government under this contract, the Contractor shall use this same clause in the subcontract or other contractual instrument, and require its subcontractors or suppliers to do so, without alteration, except to identify the parties. No other clause shall be used to enlarge or diminish the Government's, the Contractor's, or a higher-tier subcontractor's or supplier's rights in a subcontractor's or supplier's technical data.

(3) Technical data required to be delivered by a subcontractor or supplier shall normally be delivered to the next higher-tier contractor, subcontractor, or supplier. However, when there is a requirement in the prime contract for data which may be submitted with other than unlimited rights by a subcontractor or supplier, then said subcontractor or supplier may fulfill its requirement by submitting such data directly to the Government, rather than through a higher-tier contractor, subcontractor, or supplier.

(4) The Contractor and higher-tier subcontractors or suppliers shall not use their power to award contracts as economic leverage to obtain rights in technical data from their subcontractors or suppliers.

(5) In no event shall the Contractor use its obligation to recognize and protect subcontractor or supplier rights in technical data as an excuse for failing to satisfy its contractual obligation to the Government.

PS/01/8855/002

05 June 2001

(End of clause)

STANDARD COMMERCIAL WARRANTY (6001)

The contractor shall extend to the Government the full coverage of any standard commercial warranty normally offered in a similar commercial sale, provided such warranty is available at no additional cost to the Government. Acceptance of the standard commercial warranty does not waive the Government's rights under the "Inspection" clause nor does it limit the Government's rights with regard to the other terms and conditions of this contract. In the event of a conflict, the terms and conditions of the contract shall take precedence over the standard commercial warranty. The standard commercial warranty period shall begin upon final acceptance of the applicable material and/or services listed in the Schedule.

The contractor shall provide a copy of its standard commercial warranty (if applicable) with its offer. The warranty covers a period of ___\ months. **(Offeror is to insert number.)**

PERFORMANCE EVALUATION (6008)

The Government will evaluate the performance of the contractor awarded the contract resulting from this solicitation, in accordance with FAR 42.15. The following performance rating factors will be utilized:

Quality; Cost Control; Timeliness of Performance; Business Relations; Customer Satisfaction.

PS/01/8855/002
05 June 2001

SECTION "J" LIST OF ATTACHMENTS

Exhibit "A" - Contract Data Requirements List (CDRL):

| <u>Description</u> | <u>Date</u> | <u>No. of Pages</u> |
|--|--------------|---------------------|
| CDRL A001 Quality System Plan | 29 JUNE 2001 | 1 |
| CDRL A002 Contractor's Configuration Management Plan | 29 JUNE 2001 | 1 |
| CDRL A003 Test Procedure-First Article | 29 JUNE 2001 | 1 |
| CDRL A004 Test Procedure-Production | 29 JUNE 2001 | 1 |
| CDRL A005 Test/Inspection Report | 29 JUNE 2001 | 1 |
| CDRL A006 Configuration Audit Report | 29 JUNE 2001 | 1 |
| CDRL A007 Provisioning Technical Documentation | 29 JUNE 2001 | 1 |
| CDRL A008 Recommended Spare Parts List | 29 JUNE 2001 | 1 |
| CDRL A009 Engineering Change Proposals | 29 JUNE 2001 | 1 |
| CDRL A010 Request for Deviation | 29 JUNE 2001 | 1 |
| CDRL A011 Request for Waiver | 29 JUNE 2001 | 1 |
| CDRL A0012 Notice of Revision | 29 JUNE 2001 | 1 |
| CDRL A013 Failure Analysis and Corrective Action Report | 29 JUNE 2001 | 1 |
| CDRL A014 Conference Minutes | 29 JUNE 2001 | 1 |
| CDRL A015 Conference Agenda | 29 JUNE 2001 | 1 |
| CDRL A016 Contractor's Progress, Status and Management Report | 29 JUNE 2001 | 1 |
| | | |
| <u>Exhibit "B"</u> - | | |
| PRODUCT SPECIFICATION PS/01/8855/002 | 05 JUNE 2001 | 14 |
| TECHNICAL MANUAL FOR SHIPBOARD ACADA SW073-AF-MMO-010/MK 27 MOD 0 | JUNE 2001 | 32 |

DIDs are available at <http://www.dtic.mil/dps-phila/>.

**SECTION "K" - REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS
OF OFFERORS**

- I. FEDERAL ACQUISITION REGULATION (FAR) (48 CFR CHAPTER 1) PROVISIONS
- II. DEFENSE FAR SUPPLEMENT (DFARS) (48 CFR CHAPTER 2) PROVISIONS

| PART I | | |
|----------------|---|----------|
| FAR Subsection | Title | Date |
| 52.203-11 | Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions | Apr 1991 |
| | | |

PROVISIONS IN FULL TEXT

CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985) (FAR 52.203-2)

(a) The offeror certifies that--

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory--

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2)(i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above _____ (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

05 June 2001

TAXPAYER IDENTIFICATION (OCT 1998) (FAR 52.204-3)

(a) Definitions.

"Common parent," as used in this solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Taxpayer Identification Number (TIN)," as used in this solicitation provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

☐ TIN: _____.

☐ TIN has been applied for.

☐ TIN is not required because:

☐ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;

☐ Offeror is an agency or instrumentality of a foreign government;

☐ Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

☐ Sole proprietorship;

☐ Partnership;

☐ Corporate entity (not tax-exempt);

☐ Corporate entity (tax-exempt);

☐ Government entity (Federal, State, or local);;

☐ Foreign government;

☐ International organization per 26 CFR 1.6049-4;

☐ Other _____.

(f) Common Parent.

☐ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

☐ Name and TIN of common parent::

Name _____

TIN _____

WOMEN-OWNED BUSINESS OTHER THAN SMALL BUSINESS (MAY 1999) (FAR 52.204-5)

05 June 2001

(a) [*Definition.* Women-owned business concern, as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.]

(b) [*Representation.* [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representation, of this solicitation.] The offeror represents that it
[] is, [] is not a women-owned business concern.]

ECONOMIC PURCHASE QUANTITY--SUPPLIES (AUG 1987) (FAR 52.207-4)

(a) Offerors are invited to state an opinion on whether the quantity(ies) of supplies on which bids, proposals or quotes are requested in this solicitation is (are) economically advantageous to the Government.

(b) Each offeror who believes that acquisitions in different quantities would be more advantageous is invited to recommend an economic purchase quantity. If different quantities are recommended, a total and a unit price must be quoted for applicable items. An economic purchase quantity is that quantity at which a significant price break occurs. If there are significant price breaks at different quantity points, this information is desired as well.

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (APR 2001)(FAR 52.209-5)

(a)

(1) The Offeror certifies, to the best of its knowledge and belief, that --

(i) The Offeror and/or any of its Principals --

(A) Are * are not * presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

*This text is stayed per FAC 97-24

(B) Have * have not *, within the three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property;

(C) Are [] are not [] presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision; and

(D) Have [] have not [], within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(E) Are [] are not [] presently indicted for, or otherwise criminally or civilly charged by

05 June 2001

a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(D) of this provision.

(ii)

(A) The offeror, aside from the offenses enumerated in paragraphs (a)(1)(i)(A), (B), and (C) of this provision, has * has not * within the past three-years, relative to tax, labor and employment, environmental, antitrust, or consumer protection laws-

(1) Been convicted of a Federal or State felony (or has any Federal or State felony indictments currently pending against them); or

(2) Had a Federal court judgment in a civil case brought by the United States rendered against them; or

(3) Had an adverse decision by a Federal administrative law judge, board, or commission indicating a willful violation of law.

(B) If the offeror has responded affirmatively, the offeror shall provide additional information if requested by the Contracting Officer; and

The Offeror has* has not*, within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "*Principals*," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of Provision)

PLACE OF PERFORMANCE (OCT 1997) (FAR 52.215-06)

(a) The offeror or respondent, in the performance of any contract resulting from this solicitation, (☐) intends, (☐) does not intend (check applicable block) to use one or more plants or facilities located at a

PS/01/8855/002

05 June 2001

different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.

(b) If the offeror or respondent checks "intends" in paragraph (a) of this provision, it shall insert in the spaces provided the required information:

Place of Performance
(Street, Address City, County, State, Zip Code)

Name and Address of Owner and Operator of the
Plant or Facility if Other Than Offeror or
Respondent

SMALL BUSINESS PROGRAM REPRESENTATIONS (FAR 52.219-1) (MAY 2001)

(a)

(1) The North American Industry Classification System (NAICS) code for this acquisition is 334519.

(2) The small business size standard is 500.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) *Representations.*

(1) The offeror represents as part of its offer that it * is, * is not a small business concern.

(2) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, that it * is, * is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it * is, * is not a women-owned small business concern.

(4) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it * is, * is not a veteran-owned small business concern.

(5) (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.) The offeror represents as part of its offer that it * is, * is not a service-disabled veteran-owned small business concern.

(c) *Definitions.* As used in this provision--

"Service-disabled veteran-owned small business concern"--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a

05 June 2001

disability that is service-connected, as defined in 38 U.S.C. 101(16).

"*Small business concern*," means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

"*Veteran-owned small business concern*" means a small business concern-

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"*Women-owned small business concern*," means a small business concern --

(1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) *Notice.*

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall --

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of Provision)

Alternate I (Oct 2000). As prescribed in 19.307(a)(2), add the following paragraph (b)(6) to the basic provision:

(6) [*Complete only if offeror represented itself as small business concern in paragraph (b)(1) of this provision*]. The offeror represents, as part of its offer, that--

(i) It ___ is, ___ is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR Part 126; and

(ii) It ___ is, ___ is not a joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. [*The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: _____*]. Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation

PS/01/8855/002

05 June 2001

Alternate II (Oct 2000). As prescribed in 19.307(a)(3), add the following paragraph (b)(7) to the basic provision:

(7) [Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.] The offeror shall check the category in which its ownership falls:

___ Black American.

___ Hispanic American.

___ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

___ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

___ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

___ Individual/concern, other than one of the preceding.

OFFEROR RECOMMENDATIONS

| | | | PRICE | |
|---|-----------------|------------------|-------|--------------|
| <u>ITEM</u> | <u>QUANTITY</u> | <u>QUOTATION</u> | | <u>TOTAL</u> |
| <hr/> | | | | |
| <hr/> | | | | |
| <hr/> | | | | |
| (c) The information requested in this provision is being solicited to avoid acquisitions in disadvantageous quantities and to assist the Government in developing a database for future acquisitions of these items. However, the Government reserves the right to amend or cancel the solicitation and resolicit with respect to any individual item in the event quotations received and the Government's requirements indicate that different quantities should be acquired. | | | | |

ANNUAL REPRESENTATIONS AND CERTIFICATIONS--NEGOTIATION (OCT 1997)(FAR 52.215-07)

The offeror has (check the appropriate block):

(☐) (a) Submitted to the contracting office issuing this solicitation, annual representations and certifications dated _____[insert date of signature on submission], which are incorporated herein by reference, and are current, accurate, and complete as of the date of this proposal, except as follows [insert changes that affect only this solicitation; if "none", so state]:

(☐) (b) Enclosed its annual representations and certifications.

CERTIFICATION REGARDING KNOWLEDGE OF CHILD LABOR FOR LISTED END PRODUCTS (FEB 2001)(FAR 52.222-18)

(a) Definition. Forced or indentured child labor means all work or service--

(1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or

(2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which

PS/01/8855/002

05 June 2001

can be accomplished by process or penalties.

(b) Listed end products. The following end product(s) being acquired under this solicitation is (are) included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, identified by their country of origin. There is a reasonable basis to believe that listed end products from the listed countries of origin may have been mined, produced, or manufactured by forced or indentured child labor.

| Listed End Product: | Listed Countries of Origin: |
|---------------------|-----------------------------|
| | |
| | |
| | |

(c) Certification. The Government will not make award to an offeror unless the offeror, by checking the appropriate block, certifies to either paragraph (c)(1) or paragraph (c)(2) of this provision.

☐ (1) The offeror will not supply any end product listed in paragraph (b) of this provision that was mined, produced, or manufactured in a corresponding country as listed for that end product.

☐ (2) The offeror may supply an end product listed in paragraph (b) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture such end product. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(End of provision)

PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999) (FAR 52.222-22)

The offeror represents that—

(a) It ☐ has, ☐ has not participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation,

(b) It ☐ has, ☐ has not, filed all required compliance reports; and

Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

AFFIRMATIVE ACTION COMPLIANCE (APR 1984) (FAR 52.222-25)

The offeror represents that (a) it ☐ has developed and has on file, ☐ has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or (b) it ☐ has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor provided in Executive Order 11246, as amended; in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraph (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

PS/01/8855/002

05 June 2001

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the Contracting Officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance, provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in
41 CFR 60-1.1.

CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 2000) (FAR 52.223-13)

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that --

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: *[Check each block that is applicable.]*

* (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

* (ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

* (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

* (iv) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

* (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

(End of Provision)

05 June 2001

*** DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998) (DFARS 252.209-7001)**

(a) Definitions.

As used in this provision --

- (1) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.
- (2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export

Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.

- (3) "Significant interest" means --

- (i) Ownership of or beneficial interest in five percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding five percent or more of any class of the firm's securities in "nominee shares", "street names," or some other method of holding securities that does not disclose the beneficial owner;
- (ii) Holding a management position in the firm such as director or officer;
- (iii) Ability to control or influence the election, appointment, or tenure of directors or officers of the firm;
- (iv) Ownership of ten percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or
- (v) Holding fifty percent or more of the indebtedness of a firm.

(b) Prohibition on award.

In accordance with 10 U.S.C. 2327, no contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary, unless a waiver is granted by the Secretary of Defense.

(c) Disclosure.

If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclose such interest in an attachment to its offer. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include--

- (1) Identification of each government holding a significant interest; and
- (2) A description of the significant interest held by each government.

**BUY AMERICAN--BALANCE OF PAYMENTS PROGRAM CERTIFICATE (SEP 1999)
(DFARS 252.225-7000)**

(a) Definitions. "Domestic end product," "qualifying country," "qualifying country end product," and "nonqualifying country end product" have the meanings given in the Buy American Act and Balance of Payments Program clause of this solicitation.

(b) Evaluation. Offers will be evaluated by giving preference to domestic end products and qualifying country end products over nonqualifying country end products.

(c) Certifications.

- (1) The Offeror certifies that-

- (i) Each end product, except those listed in paragraphs (c)(2) or (3) of this

PS/01/8855/002

05 June 2001

provision, is a domestic end product; and

(ii) Components of unknown origin are considered to have been mined, produced, or manufactured outside the United States or a qualifying country.

(2) The Offeror certifies that the following end products are qualifying country end products:

Qualifying Country End Products

Line Item Number

Country of Origin

(List only qualifying country end products.)

(3) The Offeror certifies that the following end products are nonqualifying country end products:

Nonqualifying Country End Products

Line Item Number

Country of Origin (If known)

(End of provision)

PROHIBITION ON AWARD TO COMPANIES OWNED BY THE PEOPLE'S REPUBLIC OF CHINA (FEB 2000) (DFAR 252.225-7017)

(a) *Definition.* "People's Republic of China," as used in this provision, means the government of the People's Republic of China, including its political subdivisions, agencies, and instrumentalities.

(b) *Prohibition on award.* Section 8120 of the Department of Defense Appropriations Act for fiscal year 1999 (Pub. L. 105-262), as amended by Section 144 of Title I, Division C, of the Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999 (Pub. L. 105-277), prohibits the award of a contract under this solicitation to any company in which the Director of Defense Procurement (Office of the Under Secretary of Defense (Acquisition, Technology, and Logistics)) has determined that the People's Republic of China or the People's Liberation Army of the People's Republic of China owns more than 50 percent interest.

(c) *Representation.* By submission of an offer, the offeror represents that the People's Republic of China or the People's Liberation Army of the People's Republic of China does not own more than 50 percent interest in the offeror.

(End of provision)

REPRESENTATION OF EXTENT OF OCEAN TRANSPORTATION BY SEA (AUG 1992) (DFARS 252.247-7022)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term "supplies" is defined in the Transportation of Supplies by Sea clause of the solicitation.

(b) Representation.

PS/01/8855/002

05 June 2001

The Offeror represents that it--

___ Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

___ Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

CONTRACTOR PERFORMANCE DATA

The offeror shall demonstrate past performance through completion of the "Contractor Performance Data Sheet". The Contractor Performance Data Sheet shall be completed in its entirety. Data other than that requested on the Contractor Performance Data Sheet and in Section "L" **may** be considered. Additionally, offerors are urged to submit brief and concise responses, within the confines of the space allotted. *Failure to submit the completed Contractor Performance Data Sheet (along with the proposal) shall be considered certification (by signature on the proposal) that the contractor has no past performance for like or similar items for the Government to evaluate.*

CONTRACTOR PERFORMANCE DATA SHEET

NOTE: THE INFORMATION PROVIDED MAY BE USED TO EVALUATE THE OFFEROR'S PAST PERFORMANCE IN MEETING COSTS/PRICE, TECHNICAL, AND DELIVERY OBJECTIVES. POINTS OF CONTACT PROVIDED, MAY BE CONTACTED TO CONFIRM INFORMATION PROVIDED AND TO GATHER INFORMATION ON TECHNICAL PERFORMANCE, QUALITY, LIFE CYCLE COST AND/OR RELIABILITY. THE RESULTS MAY BE USED IN THE OVERALL COMPARATIVE EVALUATION OF THE OFFEROR (S) IN ACCORDANCE WITH SECTION M OF THE REQUEST FOR PROPOSAL.

Please list performance data on a maximum of five contracts for like or similar items, either completed or ongoing, under which performance has taken place within the last three years. Contracts with the federal government are preferred, but you may also list contracts with state and local governments or contracts with commercial customers. In determining which contracts to submit, please refer to FAR 15.305(a)(2)(I), which states in pertinent part that "[p]ast performance information is one indicator of an offeror's ability to perform the contract successfully. The currency and relevance of the information, source of the information, context of the data, and general trends in contractor's performance shall be considered in making the award decision...". The Government reserves the right to not consider any information submitted exceeding the five-contract limitation.

Contractor Name:

RFP #:

Address:

POC: (Person who can verify data)

Telephone:

Division:

FAX:

CONTRACT INFORMATION

Contract Number:

Date Completed:

Contract Type: Fixed Price

Cost Reimbursement Other (Specify)

Item Description:

PS/01/8855/002

05 June 2001

Contract Quantity/Length of Service:

Customer Name:

Address:

Customer POC: (Person who can verify data)

Telephone:

FAX:

QUALITY

NOTE: An explanation must accompany all answers with an asterisk(*).

Was consideration or a monetary withhold for non-conforming supplies/services or late deliveries assessed against this contract?

YES* ____ NO ____ (Explanation)

Was/is any part of this contract terminated for default and/or litigation?

YES* ____ NO ____ (Explanation)

Was any warranty work completed on delivered items?

YES* ____ NO ____ (Explanation)

Did you receive any quality awards in the past three years?

YES* ____ NO ____ (List Awards)

TIMELINESS

Were all items (including products, services, reports, etc.) delivered within the original contract schedule?

YES ____ NO * ____ (Explanation)

COST FOR COST TYPE CONTRACTS:

Was the original contract estimated cost met?

YES ____ NO* ____ (Explanation)

If the estimated cost was not met, what was the positive/negative percentage of change?

+_____-_____

OTHER PERTINENT INFORMATION

Describe any corrective action(s) initiated to solve any of the above-described problems/deficiencies on this contract. Discuss the success of the corrective action(s) taken.

PS/01/8855/002

05 June 2001

SECTION "L" - INSTRUCTIONS, CONDITIONS AND NOTICES TO OFFERORS

Offerors are reminded to list your Commercial and Government Entity (CAGE) Code and DUNS Number in Block 15a of Page 1.

It is requested that technical questions concerning this procurement be submitted, **in writing**, to arrive at NAVSURFWARCENDIV Crane not later than 2:00 PM EST on the seventh calendar day preceding the date shown in item 9 on page 1 addressed to the POC in block 7 of page 1.

SPECIAL NOTICE - The Director, Defense Procurement has revised DFARS to require contractors to be registered in the Central Contractor Registration (CCR) as a condition for receipt of contract award effective 1 June 1998. Offerors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at www.ccr.dlsc.dla.mil. For further details regarding the requirements of CCR, offerors are advised to review the requirements of DFAR 252.204-7004 contained herein.

The mission at NAVSEA Crane is to provide quality and responsive acquisition services for this Command. In an effort to continue to improve our services, NAVSEA Crane is conducting a survey of our vendors. This survey may be found on the World Wide Web at the following address: <http://www.crane.navy.mil/supply/VendorSurvey.htm>. Your comments will help us determine if we are accomplishing this and show us ways to improve our processes. Please consider taking the time to complete the survey.

| | <u>PART I</u> | |
|-------------------------|--|-------------|
| <u>FAR Subsection</u> | <u>Title</u> | <u>Date</u> |
| 52.204-06 | Data Universal Numbering System (DUNS) Number | Jun 1999 |
| 52.215-01 | Instructions to Offerors-Competitive Acquisition – Alternate II (Oct 1997) | May 2001 |
| | | |
| | <u>PART II</u> | |
| <u>DFARS Subsection</u> | <u>Title</u> | <u>Date</u> |
| | | |
| 252.204-7001 | Commercial and Government Entity (CAGE) Code Reporting | Aug 1999 |
| 252.219-7009 | Section 8(a) Direct Award | Jun 1998 |
| 252.227-7017 | Identification and Assertion of Use, Release or Disclosure Restrictions | Jun 1995 |
| 252.227-7028 | Technical Data or Computer Software Previously Delivered to the Government | Jun 1995 |
| | | |
| | | |

PS/01/8855/002

05 June 2001

PROVISIONS IN FULL TEXT

52.211-2 AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12-L (DEC 1999)

Copies of specifications, standards, and data item descriptions cited in this solicitation may be obtained -

(a) From the ASSIST database via the Internet at <http://assist.daps.mil>; or

(b) By submitting a request to the --

Department of Defense Single Stock Point (DoDSSP)

Building 4, Section D

700 Robbins Avenue

Philadelphia, PA 19111-5094

Telephone (215) 697-2667/2179

Facsimile (215) 697-1462.

(End of Provision)

NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (FAR 52.211-14) (SEP 1990)

Any contract awarded as a result of this solicitation will be (___) DX rated order; (X) DO rated order certified for national defense use under the Defense Priorities and Allocations System (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

TYPE OF CONTRACT (APR 1984) (FAR 52.216-1)

The Government contemplates award of a FIRM FIXED PRICE/INDEFINITE DELIVERY INDEFINITE QUANTITY contract resulting from this solicitation.

SERVICE OF PROTEST (AUG 1996) (FAR 52.233-2)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO) shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from MS. MARY SHEETZ/CONTRACTING OFFICER, CODE 1165, BLDG 3291, 300 HWY 361, CRANE IN 47522-5001.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

PREAWARD ON-SITE EQUAL OPPORTUNITY COMPLIANCE EVALUATION (FEB 1999) (52.222-24)

If a contract in the amount of \$10 million or more will result from this solicitation, the prospective Contractor and its known first-tier subcontractors with anticipated subcontracts of \$10 million or more shall be subject to a preaward compliance evaluation by the Office of Federal Contract Compliance Programs (OFCCP), unless, within the preceding 24 months, OFCCP has conducted an evaluation and

PS/01/8855/002

05 June 2001

found the prospective Contractor and subcontractors to be in compliance with Executive Order 11246.]

AUTHORIZED DEVIATIONS IN PROVISIONS (APR 1984) (FAR 52.252-5)

(a) The use in this solicitation of any Federal Acquisition Regulation (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the provision.

(b) The use in this solicitation of any Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

SUBSTITUTION OF PREVIOUSLY APPROVED SINGLE PROCESS INITIATIVE (NAVSEA) (MAY 1998)

Your proposal shall identify where you are substituting your previously approved Single Process Initiative (SPI) processes for specified requirements. In addition, offerors shall provide the information required by DFARS 252.211-7005, paragraph (c).

MAKE-OR-BUY PROGRAM (NAVSEA) (SEP 1990)

Offeror shall submit as part of its proposal a written proposed make-or-buy program in accordance with the requirements set forth herein.

(a) Definition of Make-or-Buy Program: A make-or-buy program is that part of each offeror's written plan which identifies the major work efforts, sub-systems, assemblies, subassemblies, and components to be manufactured, developed, or assembled in its own facilities, and those which will be obtained elsewhere by subcontract. The program shall not include raw materials, commercial products or off-the-shelf items unless their potential impact on contract or schedule is critical. A "make" item is any item produced, or work performed, by the offeror or its affiliates, subsidiaries, or divisions. A "buy" item is any item or work effort which will be obtained elsewhere by subcontract.

(b) Requirements of Make-or-Buy Program under this Solicitation. For purposes of this solicitation, the make-or-buy program should not include items or work efforts estimated to cost less than (a) 1% of the total estimated contract price, or (b) \$1,000,000, whichever is less.

(c) Factors to be Considered by Offeror in the Formulation of Its Make-or-Buy Program. Offeror shall consider such factors as capability, capacity, availability of small business and labor surplus area concerns as subcontract sources, the establishment of new facilities in or near sections of concentrated unemployment or underemployment, contract schedules, integration control, proprietary processes, and technical superiority or exclusiveness, before identifying in its proposed make-or-buy program that work which it considers it or its affiliates, subsidiaries, or divisions (i) must perform as "must make", (ii) must subcontract as "must buy", and (iii) can either perform or acquire by subcontract as "can make or buy".

(d) Information Required in Offeror's Make-or-Buy Program. Offeror shall include in its proposed make-or-buy program:

- (1) A description of each major item or work effort.
- (2) Categorization of each major item or work effort as "must make", "must buy", or "can either make or buy".
- (3) For each item or work effort categorized as "can either make or buy", a proposal either to "make" or to "buy".
- (4) Reasons for (i) categorizing items and work efforts as "must make" or "must buy", and (ii)

05 June 2001

proposing to "make" or to "buy" those categorized as "can either make or buy". The reasons must include the consideration given to the evaluation factors described in the solicitation and be in sufficient detail to permit the Contracting Officer to evaluate the categorization or proposal.

(5) Designation of the plant or division proposed to make each item or perform each work effort and a statement as to whether the existing or proposed new facility is in or near a labor surplus area.

(6) Identification of proposed subcontractors, if known, and their location and size status.

(7) Any recommendations to defer make-or-buy decisions when categorization of some items or work efforts is impracticable at the time of submission.

(8) Any other information the Contracting Officer requires in order to evaluate the program.

NOTIFICATION OF POTENTIAL ORGANIZATIONAL CONFLICT(S) OF INTEREST (NAVSEA) (JUN 1994)

(a) Offerors are reminded that certain existing contractual arrangements may preclude, restrict or limit participation, in whole or in part, as either a subcontractor or as a prime contractor under this competitive procurement. Of primary concern are those contractual arrangements in which the Offeror provides support to, or related laboratories (if applicable), in support of operation of the office or any of its programs. General guidance may be found in FAR 9.505; however, this guidance is not all inclusive. The Offeror's attention is directed to the "Organizational Conflict of Interest" (or similar) requirement which may be contained in current or completed contract(s) which prohibits the prime or subcontractor from providing certain supplies or services to the Government as described above during the period of the current "support" contract(s) or for a period after completion of the "support" contract(s).

Notwithstanding the existence or non-existence of an Organizational Conflict of Interest (OCI) clause or similar requirement in current or completed contract(s), the offeror shall comply with FAR 9.5 and identify whether an OCI exists and not rely solely on the presence of an OCI requirement.

(b) If a potential conflict of interest exists at any tier, each potential prime offeror is requested to notify the Contracting Officer within 14 days of the date of this solicitation. The Offeror shall provide: (1) the contract number and name and phone number of the Contracting Officer for the contract which gives rise to a potential organizational conflict of interest; (2) a copy of the requirement; (3) the statement of work (or technical instruction) from the existing contract; (4) a brief description of the type of work to be performed by each subcontractor under the competitive procurement; and (5) any additional information the Contracting Officer should consider in making a determination of whether a conflict of interest exists. The Government may independently verify the information received from the offeror.

Notwithstanding the above, the Government reserves the right to determine whether a conflict of interest exists based on any information received from any source.

(c) The Government will notify an offeror of any conflict of interest within 14 days of receipt of all required information. Those offerors deemed to have a conflict of interest may be ineligible for award. Failure to provide the information in a timely manner does not waive the Government's rights to make a conflict of interest determination. The offeror is notified that if it expends time and money on proposal preparation, such expenditure is at its own risk that the Government will not determine that an organizational conflict of interest exists.

(d) Any potential prime contractor which proposes a subcontractor later determined to have a conflict of interest and deemed ineligible to participate in the current competition, may not be granted the opportunity to revise its proposal to remove the ineligible subcontractor. The Government reserves the right to determine which offerors remain in the competitive range through the normal source selection process.

05 June 2001

(e) If the offeror determines that a potential organizational conflict of interest does not exist at any tier, the offeror shall include a statement to that effect in its response to this solicitation.

USE OF NON-DEVELOPMENTAL ITEMS (NDI) (NAVSEA) (MAY 1993)

- (a) Use of NDI is the preferred method of satisfying operational requirements of the Navy where such use does not degrade the operational or performance requirements. The term NDI means:
- (1) Any item of supply that is available in the commercial marketplace;
 - (2) Any previously developed item of supply that is in use by a department or agency of the United States, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;
 - (3) Any item of supply described in paragraph (1) or (2) that requires only minor modification in order to meet the requirements of the procuring agency; or
 - (4) Any item of supply that is currently being produced that does not meet the requirements of paragraph (1), (2), or (3) solely because the item:
 - (i) is not yet in use; or
 - (ii) is not yet available in the commercial marketplace.
- (b) Offerors are encouraged to propose NDI or partial NDI alternatives to conventional R&D or MIL-SPEC production hardware or software requirements of this solicitation at all levels of the work breakdown structure (i.e. end-item, sub-system, component, piece part, etc.). All proposed NDI alternatives shall be clearly identified in the proposal. The intent of the NDI alternative is to provide the Navy with effective and economic solutions to its essential operational requirements.

ALTERNATE PROPOSALS

Offers may submit more than one proposal, each of which must satisfy the mandatory requirements of the solicitation, including any Benchmark Tests, in order to be considered. As a minimum, one of the proposals submitted must be complete. The alternate proposal(s) may be in an abbreviated form following the same section format, but providing only those sections which differ in any way from those contained in the original proposal. Each proposal will include cost tables indicating the complete range of pricing options. In the case of price/cost options for a given configuration, an alternate proposal will not be required. If alternate proposals are submitted, such alternatives will be clearly labeled and identified on the cover page of each separate document. The reason for each alternate and its comparative benefits shall be explained. Each proposal submitted will be evaluated on its own merits.

PROPOSAL REQUIREMENTS

- (a) The past performance information and the cost/price proposal shall be submitted in separate volumes. The past performance information shall not contain any cost/pricing information, except for salary information provided on resumes.
- (b) The offeror shall submit the following information:
- (1) 2 completed signed solicitation packages, with all representations and certifications executed, and with cost/prices in Section B.
 - (2) 2 copies of the past performance proposal.
 - (3) 2 copies of the cost/price proposal.
- (c) Past Performance Information. Each past performance proposal shall enable Government

05 June 2001

evaluating personnel to make a thorough evaluation and arrive at a sound determination as to whether or not the proposal will meet the requirements of the government. To this end, each past performance proposal shall be so specific, detailed and complete as to clearly and fully demonstrate that the prospective contractor has a thorough knowledge and understanding of the requirements and has valid and practical solutions for resolving problems. Statements which paraphrase the specifications or attest that "standard procedures will be employed," are inadequate to demonstrate how it is proposed to comply with the requirements of the specifications, and this clause. **Past Performance may be submitted 15 days prior to the close of the solicitation. (The Contract Performance Data Sheet may be used to report past performance information.)**

(1) The submissions shall contain the following, which shall not exceed **16 pages (double sided) (double sided means that s each side of page counts as one page)**:

- i. Table of Contents **(One page maximum double sided)**
- ii. Executive Summary of Proposal **(ONE page maximum double sided)**
- iii. Discussion of past performance **(7 page maximum double sided).**

Price will not be counted toward page limitation. The discussion is to follow the format of these instructions.

(a) PAST PERFORMANCE

During the source selection process, the Government will assess the Offeror's past performance in the evaluation for contract award. Accordingly, each Offeror is required to submit a list of its most recent contracts (maximum of 5) for each of the same or similar items (include the names, addresses, contract numbers, and phone (voice and fax) numbers for two (2) points of contact for each reference). It is preferred that these contracts be with U.S. government customers, but contracts with other commercial concerns are also acceptable. Offerors are authorized to provide information relative to any problems encountered on the identified contracts and any corrective actions taken by the offeror. The Contracting Officer will evaluate the offeror's past performance; based upon the information furnished by the offeror, or other information obtained by the Contracting Officer. The Contracting Officer is not responsible for locating or securing any information not identified in the offer. The Contracting Officer may, however, utilize all available information, including information not provided by the Offeror, in the past performance evaluation.

If the offeror does not have past performance for these exact units, submit for evaluation evidence of relevant past performance on the part of the offeror's key/principal employees, as either a prime- or sub-contractor.

Past performance is assessed by the Contracting Officer and is assigned a narrative rating in the evaluation. Each offeror will be given an adjectival rating on past performance: highly favorable, favorable, unfavorable, or highly unfavorable. Offerors who do not have same or similar past performance information reasonably available to the Contracting Officer will be rated neither favorably nor unfavorably. The Government reserves the right to award to other than the lowest priced offer as set forth elsewhere in the solicitation. In addition, the Government may accept other than the lowest priced offer if doing so would result in greater value to the Government in terms of technical performance, quality, reliability or lower overall program risk. As a part of the past performance

05 June 2001

evaluation, the Government will assess the offeror's previous compliance with the requirements of FAR 52.219-8 and 52.219-9 as applicable. **(The offeror needs to respond to the following questions.)**

(1) Past Performance

A. Quality

1. Describe your ability to meet the specification requirements for similar systems provided under other contracts.
2. Describe how you maintain quality control and your quality assurance system.
3. Have you requested relief from system specification requirements on any of your systems? If yes, please describe the areas and the ultimate impact on system performance, cost and schedule for each request.

B. Customer Satisfaction

1. Describe and provide examples of your warranty, problem, failure and corrective action reporting and tracking system. Describe how this system is used to improve the reliability, maintainability and/or availability of your systems.
2. Describe solutions to corporate/customer differences and/or contract problems/disputes for the past three years.
3. Describe your delivery of system hardware, technical documentation and program documentation in terms of conformance with delivery schedule and other contractual requirements for the past three years.
4. Describe how you ensure adequate resources are committed, in a timely manner, to successfully solve problems and/or recommend effective solutions.

C. Business Practices

1. Describe and provide examples of interfacing with Contracting Officers/Administrators and technical representatives for the past three years.
2. Describe and provide examples of being pro-active, flexible and cooperative in your performance of Government or representative type contracts for the past three years.
3. Describe and provide examples of your effectiveness at managing similar systems for the past three years.
4. Describe your experience and process for handling radioactive materials.

The Government may use past performance information obtained from sources other than those identified by the Offeror and that information may be used for both the responsibility determination and the best value decision.

The information may be used to evaluate the Offeror's past performance in meeting costs/price, technical, delivery objectives and customer satisfaction. The results may be used in the overall comparative evaluation of the offer.

(b) Price

1. Complete pricing of all contract line items on pages 2 and 3 of the solicitation.
2. The Government will evaluate both Lots. Only 1 lot will be awarded.

ANY EXCEPTION TO THE GOVERNMENT'S TECHNICAL REQUIREMENTS/SPECIFICATIONS MUST BE INCLUDED IN THE TECHNICAL PROPOSAL AND A COVER LETTER TO THE TECHNICAL PROPOSAL.

(d) Cost/Price Proposal. The following cost/price information is required (in addition to any other requirement for cost/price information in clause ____).

(e) Exceptions. Offerors are not encouraged to take exceptions to this solicitation, however, any exceptions taken to the specifications, terms and conditions of this solicitation shall be explained in detail and set forth in a cover letter as well as in this section of the Cost Proposal. Offerors are to detail the particular section, clause paragraph and page to which they are taking exception.

ALTERNATIVES TO SPECIFICATIONS OR STANDARDS (NAVSEA) (AUG 1994)

(a) The Department of Defense is committed to minimizing the incorporation of military and outdated federal and commercial specifications and standards in contracts and is seeking to use alternative, tailored or updated non-government specifications and standards to the maximum extent practicable to satisfy the requirements.

(b) This solicitation contains military, federal and no-government specifications and standards. To assist in the standardization of military/commercial specifications and standards and to enable the Government to evaluate current commercial practices, offerors are invited to propose (1) alternatives to those mandatory military, federal or commercial specifications and standards listed in this solicitation and/or (2) tailoring of mandatory military or federal specifications and standards identified in this solicitation.

(c) Offerors are invited to demonstrate whether the mandatory military, federal or non-government specifications and standards are advantageous to the Government and whether commercial specifications and standards or tailored specifications listed herein would meet the mandatory performance requirements specified in this solicitation. Offerors should list below any commercial specification or standard and the specification or standard from the solicitation which it would replace. Any proposed tailored specifications should also be listed. Use additional pages as necessary.

SPEC/STD REPLACED

SPEC/STD PROPOSED

(Including number, rev. and date)

A copy of any proposed alternative commercial specifications or standards as well as any tailored specifications and standards shall be included in the offeror's proposal. Rationale which describes the advantages of the proposed alternative shall also be included in the offeror's proposal as detailed in the paragraph entitled "Instructions to Offerors" contained in Section L of this solicitation.

(d) Alternative A: The Government shall consider the alternative specifications and standards in meeting the solicitation requirements during the source selection evaluation. Evaluation criteria for alternative specifications and standards is contained in Section M of this solicitation. If the Government accepts the proposed alternative specifications and standards, the offeror's proposal may be incorporated into the resultant contract, either in whole or in part, at the Government's discretion. Acceptance by the Government of alternative specifications and standards does not obligate the Government to conduct discussions under this solicitation.

(d) Alternative B: It is requested that all recommendations be submitted within _____ days from the date of issuance of this solicitation to allow the Navy adequate time to make a decision and, if necessary, amend

PS/01/8855/002

05 June 2001

this solicitation prior to the time set for receipt of proposals. In the event the Navy decides to allow the use of alternative specification and standard, this solicitation will be amended accordingly.

Note: The offeror shall complete the STANDARD COMMERCIAL WARRANTY text on page 53 herein.

A copy of the offeror's warranty shall be submitted with the initial offer.

SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998) (FAR 52.252-1)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es): <http://www.arnet.gov/far>.

BLANKET EXEMPTION CERTIFICATE

In accordance with the provisions of Section 39(a) and Section 6 of the Indiana Gross Income Tax Act of 1933, Crane Division, Naval Surface Warfare Center, Crane, Indiana, is specifically exempt as a Government activity from any payment of sales and use tax has been assigned Exemption Certificate Number 0018103400015.

WORLD WIDE WEB SOLICITATION INFORMATION

Some solicitations available posted on the WWW site may not include all documents of the solicitation package. Drawings and Contract Data Requirement Lists (CDRLs) are examples of documents that may not be included due to technical issues. Under those circumstances, a notice will be provided with each solicitation package listing documents not available on WWW. Hard copies of the documents may be obtained by contacting the solicitation Point of Contact (POC) listed in the solicitation document.

Any amendments to the subject solicitation will be posted to the NSWC Crane Division WWW Page (<http://www.crane.navy.mil/supply/solicit.htm>) beneath the applicable solicitation. The complete solicitation package, including all amendments, should be received and reviewed prior to submitting a response. It is the responsibility of the offeror to obtain all amendments and/or other applicable documents prior to submission of the offer. Under these circumstances, offerors are reminded to include acknowledgement of acceptance of these amendments in their offer.

PS/01/8855/002

05 June 2001

SECTION "M" - EVALUATION FACTORS FOR AWARD

PROVISIONS IN FULL TEXT

BASIS FOR AWARD (NAVSEA) (SEP 1990)

All units of all items (either Lot I or Lot II) will be awarded to one offeror. Offers, therefore, must be on the basis of furnishing all units of all items.

WAIVER OF FIRST ARTICLE REQUIREMENTS (CONTRACTOR TESTING) (NAVSEA) (JUL 2000)

(a) If supplies identical or substantially identical to those called for in the Schedule have been previously furnished by the offeror and have been accepted by the Government, the first article requirements may be waived by the Government. The Offeror shall identify below the contract(s) under which supplies identical or substantially identical to those called for have been previously accepted by the Government:

Contract(s) _____

(b) All offerors should submit an offer on the basis that first article requirements will not be waived (hereinafter referred to as OFFER A). Offerors who believe, on the basis of paragraph (a) above, that they may qualify for waiver of first article may also submit an offer on the basis that the first article requirements will be waived (hereinafter referred to as OFFER B). This solicitation contains separate delivery schedules for OFFER A and OFFER B.

(c) Subject to considerations of responsiveness of offers and responsibility of Offerors and subject to other evaluation factors provided for in this solicitation, the price used in determining best value to the Government will be either the price submitted for OFFER A or the price submitted for OFFER B if the Government determines an offeror is eligible for first article waiver. The decision whether to grant a waiver is entirely at the discretion of the Government.

(d) Any award resulting from this solicitation will state whether the first article requirements are or are not waived. In the event of waiver, all clauses and references relating to the first article will not apply.

(End of Provision)

SINGLE AWARD FOR ALL ITEMS

Due to the interrelationship of supplies and/or services to be provided hereunder, the Government reserves the right to make a single award to the offeror whose offer is considered in the best interest of the Government, price and other factors considered. Therefore, offerors proposing less than the entire effort specified herein may be determined to be unacceptable.

PAST PERFORMANCE

During the source selection process, the Government will assess the offeror's past performance in the evaluation for contract award. Accordingly, each offeror is required to submit a list of up to five of its most recent contracts within the past three years, either completed or on-going, for the same/similar

PS/01/8855/002
05 June 2001

products or services. It is preferred that these contracts be with U.S. government customers, but contracts with other commercial concerns are also acceptable. Offerors are authorized to provide information relative to any problems encountered on the identified contracts and any corrective actions taken by the offeror. The Source Selection Authority (SSA)/Contracting Officer will evaluate the offeror's past performance based upon the information furnished by the offeror and/or other information obtained by the Contracting Officer. The Contracting Officer is not responsible for locating or securing any information not furnished with the offer. The SSA/Contracting Officer may, however, utilize all available information, including information not provided by the offeror, in the past performance evaluation. The Government reserves the right to review less than all information submitted, and to only analyze sufficient information to make a reasonable determination of each offeror's past performance rating.

If insufficient information regarding the offeror's corporate history is available, the offeror is encouraged to submit for evaluation evidence of relevant past performance on the part of the offeror's key/principal employees, as either a prime- or sub-contractor.

Past performance is assessed by the SSA/Contracting Officer and is assigned a narrative rating in the evaluation. Each offeror will be given an adjectival rating on past performance: highly favorable, favorable, neither favorable nor unfavorable, unfavorable, highly unfavorable, or no same or similar history. Offerors who do not have same or similar past performance information reasonably available to the Contracting Officer will not be rated either favorable or unfavorable. The Government reserves the right to award to other than the lowest priced offer as set forth elsewhere in the solicitation. In addition, the Government may accept other than the lowest priced offer if doing so would result in greater value to the Government in terms of technical performance, quality, reliability, life cycle cost, or lower overall program risk. As a part of the past performance evaluation, the Government will assess the offeror's previous compliance with the requirements of FAR 52.219-8 and 52.219-9 as applicable.

(1) THE FOLLOWING FACTORS WILL BE USED TO EVALUATE THE OFFERS:

A. Offerors will be required to submit past performance and price proposals.

B. Past Performance is slightly more important than Price. The Past Performance Subfactors are of equal importance. Price will not be rated, but will be considered in determining the "best value" to the Government. The price becomes more important as the degree of equality between offerors' proposals increases, or when the price is so significantly high as to diminish the value of the technical superiority to the Government.

Evaluation factors are listed below:

FACTORS

PAST PERFORMANCE Subfactors: Quality
 Customer Satisfaction
 Business Practices

PRICE

The Government will award based on a best value, as to which offeror shall be awarded a contract. The government reserves the right to award on initial offers.

The evaluated contract price will be for LOT I and LOT II. Only one Lot will be awarded based on the LOT pricing evaluation. **Lot I evaluation** equals the sum of CLINS 0001, plus the average price for the stated quantities for the stated years identified below. CLIN 0003 evaluated at the Government estimated amount. The total will be sum to arrive at the total evaluated price. **Lot II evaluation** equals the average price of CLINS 0001 for the proposed prices in the years at the quantities shown below. CLIN 0002 evaluated at the Government estimated amount. The total will be sum to arrive at the total evaluated price. The following is provided for information purposes only.

LOT I Evaluation:

For CLINs 0001 through 0003 proposed prices for the indicated quantities by year:

(+) (THE PROPOSED CLIN 0001 PROPOSED PRICES FOR 3 EACH)

- (+) (THE PROPOSED CLIN 0002 PROPOSED PRICE FOR 362 UNITS IN YEAR 1)**
- (+) (THE PROPOSED CLIN 0002 PROPOSED PRICE FOR 200 UNITS IN YEAR 1)**
- (+) (THE PROPOSED CLIN 0002 PROPOSED PRICE FOR 1000 UNITS IN YEAR 1)**
- (+) (THE PROPOSED CLIN 0002 PROPOSED PRICE FOR 50 UNITS IN YEAR 2)**
- (+) (THE PROPOSED CLIN 0002 PROPOSED PRICE FOR 300 UNITS IN YEAR 2)**
- (+) (THE PROPOSED CLIN 0002 PROPOSED PRICE FOR 100 UNITS IN YEAR 3)**
- (+) (THE PROPOSED CLIN 0002 PROPOSED PRICE FOR 600 UNITS IN YEAR 3)**
- (+) (THE PROPOSED CLIN 0002 PROPOSED PRICE FOR 5 UNITS IN YEAR 3)**

(+) THE SUM OF THESE 8 UNIT PRICES DIVIDED BY 8 = THE AVERAGE PRICE OF THE LISTED PRICES

(+) (THE ESTIMATED AMOUNT OF \$950,000 FOR CLIN 0003)

(=) EVALUATED PRICE CLINS 0001 through 0003 SUM TOTAL AMOUNT

LOT II Evaluation:

– For CLINs 0001 through 0002 proposed prices for the indicated quantities by year.

- (+) (THE PROPOSED CLIN 0001 PROPOSED PRICE FOR 362 UNITS IN YEAR 1)**
- (+) (THE PROPOSED CLIN 0001 PROPOSED PRICE FOR 200 UNITS IN YEAR 1)**
- (+) (THE PROPOSED CLIN 0001 PROPOSED PRICE FOR 1000 UNITS IN YEAR 1)**
- (+) (THE PROPOSED CLIN 0001 PROPOSED PRICE FOR 50 UNITS IN YEAR 2)**
- (+) (THE PROPOSED CLIN 0001 PROPOSED PRICE FOR 300 UNITS IN YEAR 2)**
- (+) (THE PROPOSED CLIN 0001 PROPOSED PRICE FOR 100 UNITS IN YEAR 3)**
- (+) (THE PROPOSED CLIN 0001 PROPOSED PRICE FOR 600 UNITS IN YEAR 3)**
- (+) (THE PROPOSED CLIN 0001 PROPOSED PRICE FOR 5 UNITS IN YEAR 3)**

(+) THE SUM OF THESE 8 UNIT PRICES DIVIDED BY 8 = THE AVERAGE PRICE OF THE LISTED PRICES

(+) (THE ESTIMATED AMOUNT OF \$950,000 FOR CLIN 0002)

(=) EVALUATED PRICE CLINS 0001 through 0002 SUM TOTAL AMOUNT

PS/01/8855/002

05 June 2001

The Government reserves the right to waive First Article testing and approval if supplies similar or identical to those called for have been previously delivered by the offeror and accepted by the Government. Therefore, alternate offers are permitted. Lot I includes First Articles while Lot II does not. Award will be made by lot, and only one lot will be awarded.

Note: Award will be made to the offeror whose offer is most advantageous to the Government.

PS/01/8855/002
05 June 2001

PRODUCT SPECIFICATION
FOR
SHIPBOARD AUTOMATIC CHEMICAL AGENT DETECTOR
and ALARM
(Shipboard ACADA)



NIGHT VISION & CHEMICAL/BIOLOGICAL
SENSORS DEPARTMENT
MICROWAVE SYSTEMS DIRECTORATE
NAVAL SURFACE WARFARE CENTER, CRANE DIVISION

APPROVED BY:

DIRECTOR
NIGHT VISION & CHEMICAL/BIOLOGICAL SENSORS DEPARTMENT

June 2001

PS/01/8855/002
05 June 2001

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CODE 805
INTERNAL REVIEW SHEET

PREPARED BY: Naval Surface Warfare Center, Crane Division,
Code 805D, Cleve Benton, Sandy Clark

Team Leader, Code 805D
Chemical/Biological Warfare Detection Team

Date_____

Project Manager, Code 805D
Chemical/Biological Warfare Detection

Date_____

05 June 2001

[illegible]

TABLE OF CONTENTS

| <u>SECTION</u> | | <u>PAGE</u> |
|----------------|--|-------------|
| 1.0 | SCOPE..... | 1 |
| 1.1 | Technical Data Package..... | 1 |
| 1.2 | Licensing | 1 |
| 2.0 | SYSTEM DEFINITION | 1 |
| 2.1 | Detector Unit (DU) | 1 |
| 2.2 | Power Supply Assembly | 1 |
| 2.3 | Miscellaneous Hardware | 1 |
| 2.4 | Software | 2 |
| 3.0 | SYSTEM PERFORMANCE REQUIREMENTS | 2 |
| 3.2 | Detection Unit Assembly | 3 |
| 3.2.1 | Power Source | 3 |
| 3.2.2 | Status Self-Monitoring | 3 |
| 3.2.3 | Airflow | 3 |
| 3.2.4 | Agent Response | 3 |
| 3.2.5 | Confidence Check | 3 |
| 3.2.6 | False Alarm | 4 |
| 3.2.7 | Operation | 5 |
| 3.2.8 | Alarm | 5 |
| 3.2.9 | Alarm Silence | 5 |
| 3.3 | Mean Time between Operational Mission Failure (MTBOMF) | 5 |
| 4.0 | ENVIRONMENTAL REQUIREMENTS | 5 |
| 4.1 | Transient Voltage and Frequency | 5 |
| 4.2 | Operating Temperature | 5 |
| 4.3 | Storage Temperature | 5 |
| 4.4 | Vibration | 6 |
| 4.5 | Shock – Transit Drop | 6 |
| 4.6 | Electromagnetic Emission and Susceptibility | 6 |
| 4.7 | Humidity | 6 |
| 4.8 | Salt Fog | 6 |
| 5.0 | PRODUCTION/FABRICATION | 6 |
| 5.1 | Production Drawings | 6 |
| 5.2 | Serialization | 6 |
| 5.3 | Standards of Manufacture | 7 |
| 5.4 | Workmanship | 7 |
| 5.5 | Cleaning and Surface Finishes | 7 |
| 5.6 | Workmanship Screen | 7 |
| 6.0 | TESTS AND INSPECTIONS | 7 |
| 7.0 | TEST AND INSPECTION METHODS | 8 |
| 7.1 | Physical Inspection | 8 |
| 7.2 | Standard Test Conditions | 8 |
| 7.3 | Performance Tests | 8 |
| 7.3.1 | Test Methods | 9 |

PS/01/8855/002
05 June 2001

| | | |
|---------|---|----|
| 7.3.2 | Operational Check | 9 |
| 7.3.3 | Live Agent Response | 9 |
| 7.4 | Environmental Tests | 9 |
| 7.4.1 | Transient Voltage and Frequency | 9 |
| 7.4.1.1 | Transient Voltage | 10 |
| 7.4.1.2 | Transient Frequency | 10 |
| 7.4.2 | Operating Temperature | 10 |
| 7.4.2.1 | High Temperature | 10 |
| 7.4.2.2 | Low Temperature | 10 |
| 7.4.3 | Storage Temperature | 10 |
| 7.4.3.1 | Pretest Standard Ambient Checkout | 10 |
| 7.4.3.2 | Low Temperature | 11 |
| 7.4.3.3 | High Temperature | 11 |
| 7.4.4 | Vibration | 11 |
| 7.4.5 | Shock – Transit Drop | 11 |
| 7.4.6 | Electromagnetic Emission and Susceptibility | 11 |
| 7.4.7 | Humidity | 11 |
| 7.4.7.1 | Conditioning | 12 |
| 7.4.7.2 | Temperature Cycling | 12 |
| 7.4.7.3 | Operational Check | 12 |
| 7.4.8 | Salt Fog | 12 |
| 7.5 | Workmanship Screen | 12 |
| 7.5.1 | Temperature Cycling | 12 |
| 7.5.2 | Random Vibration | 13 |

TABLE

| | | |
|-----|--|----|
| 7.1 | First Article Tests/Quality Conformance Inspections... | 14 |
|-----|--|----|

05 June 2001

1. **SCOPE**. This specification establishes the requirements for manufacture, operation, test and acceptance of the Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA).

1.1 **TECHNICAL DATA PACKAGE**. The contractor shall use the furnished Technical Data Package (Top Drawing Number 53711-7344570), the Technical Manual (SW073-AF-MMO-010 / MK 27 MOD 0) and the contract statement of work to produce the required first article test and production units.

1.2 **LICENSING**. The contractor shall be required to deliver the Shipboard ACADA System as an exempt item. That is, an item incorporating a gas and aerosol detector, containing byproduct radioactive material, such that any person using the Shipboard ACADA System is exempt from the U.S. Nuclear Regulatory Commission's (NRC) regulatory requirements. Fabrication, initial distribution, and use of devices containing radioactive material are regulated by the NRC. The contractor/manufacturer would be expected to obtain all appropriate NRC licenses to manufacture and distribute the gas and aerosol detector. Delivery (distribution) of the gas and aerosol detector must be in accordance with the Title 10, Code of Federal Regulations Parts 30 and 32, in particular §30.20 and §32.26.

2.0 **SYSTEM DEFINITION**. Shipboard ACADA consists of a single Detector Unit (DU) housing and a battery pack assembly in accordance with drawing number 53711-7344570. The housing contains a heated cell assembly, an alphanumeric display panel, pumps, sample and recirculating pneumatics, electronics, and an audible piezoelectric alarm. The detector housing couples directly to a battery pack containing a sealed lead acid battery, which acts as the power source for the detector. The battery pack plugs into 110 V-AC ship's power to re-charge the batteries and has an additional alphanumeric display to indicate the charge status of the batteries. The heated cell assembly contains the IMS cells, a desiccant cartridge assembly, and an acetone source. The cells implement ion mobility spectroscopy (IMS) technology to ionize the air samples. The electronic output of the IMS cells is digitally processed to look for the presence of chemical warfare agent vapors. If the presence of agent vapors is detected, a visual display message is sent to the alphanumeric display on top of the detector and a local audible alarm is sounded.

Shipboard ACADA is designed to be used as a shipboard man-portable post attack monitoring survey instrument that is operated by Damage Control Parties during heightened threat levels after an actual chemical attack, or for training. Paragraphs 2.1, 2.2 and 2.3 describe a complete Shipboard ACADA System.

2.1 **DETECTOR UNIT (DU)**. Enclosed in the DU (Drawing 53711-7243432) are two IMS cells, all electronic circuitry and software required for detector operation, all software for signal analysis and system control, and two pumps with regulating valves that control the flow of air through the sample and recirculating flow paths.

The DU samples air through the sample intake port and divides the sample between two IMS cells that operate simultaneously to generate two different electronic waveforms or signals from the sample.

The computer software algorithm analyzes the two electronic signals generated by the IMS cells. Once the signals are analyzed, digital signals are sent to the alphanumeric display to show the appropriate messages or engage the audible alarm.

2.2 **POWER SUPPLY ASSEMBLY.** When operating on ship's power 110 VAC, the Power Supply Assembly (Drawing 53711-7343940) will automatically begin charging until full charge status is reached. The battery will maintain full charge while the detector is connected to 110 VAC. Upon disconnect from 110 VAC, the battery provides the power to operate the system for up to 2 hours. The charge status of the battery is indicated on the battery pack display.

2.3 **MISCELLANEOUS HARDWARE.**

2.4 **SOFTWARE** The following software will be provided as Government Furnished Information (GFI) to the contractor by the contracting agency.

DRAWING

NAVAL SEA SYSTEMS COMMAND (NAVSEA)

53711-7344557 - Software Program, Eprom

SACADADSP.B3

53711-7343958 - Soft Program, Troubleshooting/Signature,

Detection Unit (PC Based)

53711-7344562 - Software Program, PAL

SACADA.JED

53711-7344558 – Software Program, Eprom

SACADADSP.B2

53711-7344559 – Software Program, Eprom

SACADCDSB.B1

53711-7344560 – Software Program, Eprom

SACADADSP.B0

53711-7344561 – Software Program Eprom

SACADAMICRO.HEX

3.0 **SYSTEM PERFORMANCE REQUIREMENTS.** The Shipboard ACADA shall provide automatic nerve and blister agent vapor detection, audible alarms, and visual displays. The system shall (1) detect CW agent vapors, (2) provide system control, audible and visual alarms and system status information, and (3) provide a standard communication interface to an external device. The Shipboard ACADA shall be a dual cell IMS type detector capable of detecting low concentrations of chemical nerve agents and blister agents in a vapor state (see 3.2.5). One cell shall be dedicated to detecting nerve agents and one cell shall be dedicated to detecting blister agents. The DU Operating Software Program (drawing 53711-7537886) will be expandable for recognition of new and novel agents and any new interferents causing false positive or false negative alarms. Upon detection, the system shall automatically provide flashing alphanumeric display and audible alarms. Components shall be individually tested both separately and in a complete system configuration. Operation of the system shall be in accordance with technical manual SW073-AF-MMO-010 /MK 27 MOD 0.

3.2 **DETECTION UNIT ASSEMBLY.** The IMS cells located within the DU shall be

05 June 2001

operated at 180° F internally. All electronic/electrical components shall be capable of operation without failure or degradation in ambient cabinet temperatures up to 180° F.

3.2.1 **POWER SOURCE**. Power shall be supplied from 115V \pm 10%, 60 Hz \pm 5% sources.

3.2.2 **STATUS SELF-MONITORING**. Upon startup and every four hours thereafter, the DU shall automatically self-check its operational status and send updated operational status information to the DU for display.

3.2.3 **AIRFLOW**. The sample airflow from the DU inlet pitot tube shall be 4.5 ± 0.2 liters per minute (lpm). An error message shall be transmitted when the sample vacuum falls below 5.5 psi or rises above 9.5 psi (normal setpoint is 7.5 psi vacuum). The drift airflow through each IMS cell shall be 2.2 ± 0.1 lpm. An error message shall be transmitted when the cell pressure falls below 4.5 psi or rises above 8.5 psi (normal setpoint is 6.5 psi Pressure).

3.2.4 **AGENT RESPONSE**. The Shipboard ACADA shall be used as a point sampling alarm and a monitoring/survey instrument with the sensitivity and response times listed in Table 1. The Shipboard ACADA shall automatically detect vapors from both neat and thickened G type nerve agents, neat and thickened H type blister agents, V type nerve agents, nerve agent simulant Methyl Salicylate (MS), blister agent simulant Dipropylene Glycol Methyl Ether (DPM) and similar compounds with probability of detection of .95. Probability of detection is defined to be the ratio of positive chemical alarms to the number of agent challenges. The DU shall produce an alarm signal that activates an audible alarm and flashing visual display message in less than 60 seconds when presented with the following agents in an inhalable vapor state:

Nerve agents (G series and VX) at 0.1 milligrams per cubic meter (mg/m³) or Higher.

Blister agents (H series) at 10 mg/m³ or higher.

The visual display message at the DU shall accurately identify the agent as G, VX or H.

Table 1. Detection Requirements.

| AGENT CLASS AND TYPE | AGENT CONCENTRATION (mg/m ³) | RESPONSE TIME (in seconds)* | TEMPERATURE RANGE |
|------------------------|--|-----------------------------|-------------------|
| Nerve (VX) | 0.04 ± 0.01 | . 90 | 0 ° C - 50 ° C |
| | 1.00 ± 0.10 | . 10 | 0 ° C - 50 ° C |
| Nerve (GA, GB, GD, GF) | 0.10 ± 0.02 | . 30 | 0 ° C - 50 ° C |
| | 1.00 ± 0.10 | . 10 | 0 ° C - 50 ° C |
| Blister (HD) | 10.00 ± 0.20 | . 120 | 0 ° C - 50 ° C |
| | 50.00 ± 5.00 | . 10 | 0 ° C - 50 ° C |

* Response times are at RH = ambient.

3.2.5 **Confidence Check**. One confidence sample (NSN 6665-01-382-7081) shall be provided with each Shipboard ACADA to check the system response. Simulants used

05 June 2001

are dipropyleneglycol monomethylether (DPM) (CAS #034590-94-8) for nerve agents and methyl salicylate (MeS) (CAS #000119-36-8) for blister agents. The DU shall produce an audible alarm and the appropriate visual message in less than 60 seconds when presented with the simulant, while in the confidence test mode of operation.

3.2.6 **FALSE ALARMS**. The Shipboard ACADA shall not false alarm when exposed to the shipboard interferents listed below. Challenges with the substances marked with an asterisk (*) shall be included in the performance test (see 7.3.1).

- Ammonium hydroxide
- * Aqueous Film Forming Foam, (AFFF) concentrated & dilute
- Aviation gas
- Contract cement
- Cutting/tapping oil
- * Diesel fuel
- * Dry film lubricant
- Engine de-greaser
- Engine primer
- * Gasoline
- * General purpose grease
- General purpose detergent
- Glycerol
- Hydrochloric acid (HC1)
- Insect repellent
- * Jet fuel JP-4 & JP-5
- Lube oil
- Penetrating oil
- * Pine oil cleaner
- Propanol isopropanol alcohol
- * Silicone alkyd paint fumes
- * Thinner, paint
- Tung oil
- Weapons oil

3.2.7 **OPERATION**. When operating, the DU shall display status messages when the system is activated.

3.2.8 **ALARM**. The DU shall have an alarm response time as indicated in Table 1. Response time is the time between the CW agent or simulant vapors are drawn into the system-sampling intake until the audible alarm is activated. The DU shall provide local audible and flashing visual messages. Alarm messages shall remain on the display until the level of agent or simulant falls below the concentration level required for detection, as indicated in Table 1. The DU shall provide a continuous local audible alarm that shall measure a minimum of 95dB @ 30 cm.

3.2.9 **ALARM SILENCE**. The local audible alarm shall be capable of being silenced manually by the operator.

3.3 **MEAN TIME BETWEEN OPERATIONAL MISSION FAILURE (MTBOMF)**. The Shipboard ACADA shall have a MTBOMF of not less than 400 hours based upon a mission time of 4 hours and a reliability of 0.99. The mission time is the length of time that the Shipboard ACADA will run continuously. An operational mission failure is a failure or combination of failures, which prevents the Shipboard ACADA from detecting and alarming as specified herein. This definition for operational mission failure is used to calculate the overall system reliability.

4.0 **ENVIRONMENTAL REQUIREMENTS**. The Shipboard ACADA is designed to be sheltered equipment, stored within the skin of the ship. This does not necessarily mean within a controlled environment (HVAC). Unless otherwise specified, the equipment shall operate properly in all modes without material or operational degradation during and after exposure to specified environment.

4.1 **TRANSIENT VOLTAGE and FREQUENCY**. The Shipboard ACADA shall withstand the transient voltage and frequency test (see 7.4.1) without false alarms, or error messages displayed. Steady state voltage and frequency conditions are $115V \pm 10\%$ and $60Hz \pm 5\%$.

4.2 **OPERATING TEMPERATURE**. The Shipboard ACADA shall meet the performance requirements of section 3 when exposed to the high and low operating temperatures of $+50^{\circ}C$ and $0^{\circ}C$ without false alarms or error messages (see 7.4.2).

4.3 **STORAGE TEMPERATURE**. The Shipboard ACADA shall withstand storage temperatures of $-40^{\circ}C$ to $+70^{\circ}C$ (see 7.4.3). There shall be no evidence of physical damage or deterioration during or after exposure to these temperatures. The Shipboard ACADA shall meet the performance requirements of section 3 during the operational checks.

4.4 **VIBRATION**. The Shipboard ACADA shall operate at the vibration levels specified in MIL-STD-167-1, Type 1, without false alarms or error messages (see 7.4.4). Operational checks shall meet the performance requirements of section 3.

4.5 **SHOCK – TRANSIT DROP**. Shipboard ACADA shall operate properly after being dropped a total of 5 times from a height of 48 inches onto detector top onto a test bed constructed of two inches of plywood backed by concrete. One drop onto each of the following parts of the detector shall be performed: flat surface of detector base, long edge of the detector base, short edge of the detector base, corner of the detector base, and the detector top.

4.6 **ELECTROMAGNETIC EMISSION and SUSCEPTIBILITY**. The Shipboard ACADA shall meet the requirements of MIL-STD-461 for non-metallic, surface ships (see 7.4.6). Operational performance shall be as specified in section 3.

4.7 **HUMIDITY**. The Shipboard ACADA shall withstand the humidity test (see 7.4.7) without alignment or adjustments, other than the accessible controls employed for

operation of the Shipboard ACADA. Operational checks shall meet the performance requirements of section 3.

4.8 **SALT FOG**. The Shipboard ACADA shall operate as specified in section 3 following exposure to a salt fog environment in accordance with ASTM B 117 (see 7.4.8). There shall be no evidence of corrosion or other damage as the result of exposure to the salt fog environment.

5.0 **PRODUCTION/FABRICATION**.

5.1 **PRODUCTION DRAWINGS**. The equipment shall be fabricated and assembled in accordance with the drawings, parts lists, other documents listed on Drawing 53711-7344570 and other requirements as directed within the contract.

5.2 **SERIALIZATION**. Each configuration item (DU and Battery Box) shall be permanently marked with a unique serial number. The Contractor shall request serial number assignment, in writing, from NSWCR Crane, Code 805D. In addition, each IMS cell containing Americium 241 shall be permanently marked with its own unique serial number to allow for radiation wipe test tracking. Methods of marking and generation of specific serial numbers shall be approved by the contracting agency.

5.3 **STANDARDS OF MANUFACTURE**. Standards of manufacture shall be of a level of quality to assure that the processed products meet the performance requirements of the engineering drawings and the criteria specified herein.

5.4 **WORKMANSHIP**. The Shipboard ACADA shall be in accordance with the dimension, design, markings and materials as specified in the production drawings and as specified herein. The Shipboard ACADA shall withstand the tests specified herein without permanent deformation, or malfunction and shall be clean and free of cracks and burrs.

5.5 **CLEANING and SURFACE FINISHES**. All surfaces shall be clean and free of dirt, sharp edges, scales and other harmful or extraneous materials. All surfaces shall also be free of defects such as cracks, porosity, undercuts, voids and gaps. External surfaces shall be smooth and edges shall be either rounded or beveled. There shall be no burn through. There shall be no warpage or dimensional change due to heat from welding or soldering operations.

5.6 **WORKMANSHIP SCREEN**. Each Shipboard ACADA component containing electronic parts shall be subjected to a workmanship-screening test. Each component of the Shipboard ACADA that contains electronic parts shall undergo three cycles of high and low temperature operation before acceptance. The last cycle shall be failure free. During temperature cycling, random vibration shall be applied to components containing electronic parts.

6.0 **TESTS AND INSPECTIONS**. NSWCR Crane, Code 805D, will provide one cable test set for testing. A cable test set shall consist of the following:

05 June 2001

- a) One ten foot DU/Computer cable (with an M28840/16AA1P1 connector on one end and a 9 pin Female serial connector on the other end.

NOTE: Cable lengths above are for planning purpose. Final lengths to be supplied will be coordinated with contractor.

7.0 **TEST AND INSPECTION METHODS.** The shipboard ACADA shall be tested in the system configuration specified in drawing number 53711-7344570 and energized via a 115 V 60 Hz power source. Except for live agent and environmental testing. For live agent and environmental testing no less than one system shall be used. A computer with the DU Troubleshooting/Signature Analysis Software Program (drawing 53711-7343958) installed shall be connected to the Detector Unit to record the signal output during all live agent and simulant challenges. These recordings shall be included in the applicable test reports.

7.1 **PHYSICAL INSPECTION.** Parts, materials, and assemblies shall be inspected to determine conformance to the drawings specified in section 5. Packaging and packing of each system shall be inspected to determine conformance to the requirements specified in the Contract, Section D.

7.2 **STANDARD TEST CONDITIONS.** Except where the following factors are the variables, the tests specified herein shall be conducted with the equipment operating under the following condition:

- a) Temperature: $23 \pm 10^{\circ}\text{C}$ ($73 \pm 18^{\circ}\text{F}$)
- b) Relative humidity: Contractor shall record actual Conditions at time of testing.
- c) Atmospheric pressure: Contractor shall record actual conditions at time of testing.

7.3 **PERFORMANCE TESTS.**

7.3.1 **TEST METHODS.** The test methods to verify that the System meets the performance requirements as specified in Section 3 shall be defined by the contractor and approved by the government in the test plan.

7.3.2 **OPERATIONAL CHECK.** An operational check, including simulant check, which is sufficient to ensure that the basic performance of the system as specified herein has not been degraded by the environmental tests shall be defined in the contractor's test plans and shall be performed as required by the environmental test (see 7.4).

7.3.3 **LIVE AGENT RESPONSE.** Live agent testing must be conducted at a Government approved surety-testing laboratory. The DU shall be allowed to operate for not less than 2 hours prior to the start of testing. An operational check shall be performed to verify system operation prior to agent challenge. The equipment Shall be challenged no less than twenty times each with each of the following live agents (thus, there will be a total of not less than 240 challenges: $12 \times 20 = 240$):

- . 0.1 milligrams per cubic meter (mg/m^3) of GA
- . 1.0 mg/m^3 of GA
- . 0.1 mg/m^3 of GB
- . 1.0 mg/m^3 of GB
- . 0.1 mg/m^3 of GD
- . 1.0 mg/m^3 of GD
- . 0.1 mg/m^3 of GF
- . 1.0 mg/m^3 of GF
- . 0.1 mg/m^3 of VX
- . 1.0 mg/m^3 of VX
- . 10 mg/m^3 of HD, and
- . 20 mg/m^3 of HD.

Purity of live agents shall be no less than 90 percent. The cell signatures, time for an alarm to occur, alarm message displayed, and clear-down time shall be recorded. Audible alarms and visual display messages shall be verified.

7.4 **ENVIRONMENTAL TESTS**

7.4.1 **TRANSIENT VOLTAGE and FREQUENCY**. Throughout each test, the Shipboard ACADA shall be monitored for false alarms, error messages and other signs of failure. Performance shall meet the requirements of 4.1.

7.4.1.1 **TRANSIENT VOLTAGE**. With the Shipboard ACADA operating in the run mode at the upper limit of steady state ac voltage, a transient voltage of minus 15 volts recovering to the steady-state band in 2 seconds shall be superimposed. Upon completion of this test, an operational check (see 7.3.2) shall be performed.

7.4.1.2 **TRANSIENT FREQUENCY**. With the Shipboard ACADA operating in the run mode at the upper limit of steady-state frequency, a transient frequency of plus 1.5 Hz recovering to the steady-state band in 2 seconds shall be superimposed. With the Shipboard ACADA operating in the run mode at the lower limit of steady-state frequency, a transient frequency of minus 1.5 Hz recovering to the steady-state band in 2 seconds shall be superimposed. Upon completion of this test, an operational check (see 7.3.2) shall be performed.

7.4.2 **OPERATING TEMPERATURE**. The Shipboard ACADA shall be operating in the run mode throughout the test and monitored for false alarms, error messages and other signs of failure. Performance shall meet the requirements of 4.2.

7.4.2.1. **HIGH TEMPERATURE**. The Shipboard ACADA operating environment shall be heated to a high temperature of $+50^\circ\text{C}$ for a period of 24 hours, to insure temperature stabilization of components. Following temperature stabilization, an operational check shall be performed with the Shipboard ACADA at $+50^\circ\text{C}$. The Shipboard ACADA operating environment temperature shall be returned to $25 \pm 5^\circ\text{C}$. After temperature stabilization of the components, an operational check shall be

performed.

7.4.2.2 **LOW TEMPERATURE**. The Shipboard ACADA operating environment shall be cooled to a low temperature of 0°C for a period of 24 hours, to ensure temperature stabilization of all components. Following temperature stabilization, an operational check (see 7.3.2) shall be performed with the Shipboard ACADA at 0°C. The Shipboard ACADA operating environment temperature shall be returned to $25 \pm 5^\circ\text{C}$. After temperature stabilization of the components, an operational check (see 7.3.2) shall be performed.

7.4.3 **STORAGE TEMPERATURE**. Except when required for an operational check, the Shipboard ACADA shall be de-energized throughout this test. Performance shall meet the requirements of 4.3.

7.4.3.1 **PRETEST AMBIENT CHECKOUT**. A complete examination and an operational check (see 7.3.2) of the Shipboard ACADA shall be conducted prior to the start of testing.

7.4.3.2 **LOW TEMPERATURE**. The Shipboard ACADA environment shall be cooled to a temperature of -40°C for 24 hours to ensure temperature stabilization of all components. After temperature stabilization, the Shipboard ACADA shall be visually examined for any pertinent physical changes. The temperature of the Shipboard ACADA environment shall be returned to $25 \pm 5^\circ\text{C}$. After temperature stabilization of the components, and operational check (see 7.3.2) shall be performed and a thorough visual inspection shall be conducted with special attention to stress areas.

7.4.3.3 **HIGH TEMPERATURE**. The Shipboard ACADA environment shall be heated to 70°C or 24 hours to ensure temperature stabilization of all components. After temperature stabilization, the Shipboard ACADA shall be visually examined for any pertinent physical changes. The temperature of the Shipboard ACADA environment shall be returned to $25 \pm 5^\circ\text{C}$. After temperature stabilization of the components, an operational check (see 7.3.2) shall be performed and a thorough visual inspection shall be conducted with special attention to stress areas.

7.4.4 **VIBRATION**. Throughout this test the Shipboard ACADA shall be tested for operation under conditions of shipboard vibration as specified in MIL-STD-167-1, Type 1. An operational check (see 9.3.2) and a visual inspection shall be performed prior to the vibration test and after each axis of vibration. Performance shall meet the requirements of 4.4.

7.4.5 **SHOCK – TRANSIT DROP**. The Shipboard ACADA shall withstand and operate after each test cycle as described in 4.5. An operational check (see 7.3.2) shall be performed prior to the shock testing and after each drop. Performance shall meet the requirements of 4.5.

7.4.6 **ELECTROMAGNETIC EMISSION and SUSCEPTIBILITY**. Throughout this test

05 June 2001

the Shipboard ACADA shall be operating in the run mode. The Shipboard ACADA shall be tested as specified in MIL-STD-462. Performance shall meet the requirements of 4.6.

7.4.7 HUMIDITY. The Shipboard ACADA shall be subjected to the following conditioning and test. Except for the periods of test indicated below, the Shipboard ACADA shall be operating in the standby mode. The Shipboard ACADA shall meet the requirements specified herein without alignment or adjustments, other than the accessible controls employed for operation of the equipment. No repairs shall be permitted before measurements are taken. If repairs are required, they shall be documented and the operational check shall be repeated after the necessary replacements have been made. Performance shall meet the requirements of 4.7.

7.4.7.1 CONDITIONING. In order to establish a reference condition for the measurement of operating parameters and a valid basis for comparison of the effects of the conditioning to follow, the Shipboard ACADA shall be dried at a temperature not less than 40°C or more than 50°C for not less than 2 hours. Upon completion of this conditioning, an operational check (see 7.3.2) shall be performed at $25 \pm 5^\circ\text{C}$ and $50 \pm 5\%$ relative humidity.

7.4.7.2 TEMPERATURE CYCLING. The Shipboard ACADA shall be subjected to ten 24-hour cycles of temperature variation consisting of 12 hours at $65 \pm 5^\circ\text{C}$ and 20% humidity and 12 hours at $25 \pm 5^\circ\text{C}$ and 80% humidity. The transitions between temperatures shall be accomplished within the low temperature period so that the time at the high temperature is not less than 12 hours. Each temperature transition shall not exceed 2 hours. The relative humidity need not be controlled during the transition periods.

7.4.7.3 OPERATIONAL CHECKS. During each cycle, an operational check (see 7.3.2) shall be performed at $65 \pm 5^\circ\text{C}$ and at 25°C with the Shipboard ACADA remaining in the chamber. The Shipboard ACADA shall be placed in the run mode only for as brief a period as required to complete the operational check. After the ten complete cycles, an operational check (see 7.3.2) shall be performed at $25 \pm 5^\circ\text{C}$.

7.4.8 SALT FOG. The Shipboard ACADA shall be tested in accordance with ASTM B 117. The test shall be conducted for a period of 96 hours. Upon completion of the test, an operational check (see 7.3.2) and a visual inspection for rust, corrosion, galvanic deterioration and other material changes shall be conducted. Performance shall meet the requirements of 4.8.

7.5 WORKMANSHIP SCREEN. If the manufacturer has an established screening process that meets or exceeds the condition of the following test, the manufacturer's process may be used, with the approval of the contracting agency.

7.5.1 TEMPERATURE CYCLING. Shipboard ACADA equipment shall be subjected to three (3) temperature cycles. Each cycle shall consist of four (4) hours of equipment

05 June 2001

operating time at the high temperature of 50°C and for two (2) hours at the low temperature of 0°C. The rate of temperature change shall be 22°C per minute measured at the component level with thermocouples. A temperature soak shall commence when internal parts have stabilized within 3°C of the specified temperature and shall not end until the specified soaking period has elapsed and functional tests performed. Equipment shall be energized during temperature cycling. The last cycle of the test shall be failure free to ensure that the latest repairs were accomplished successfully.

7.5.2 RANDOM VIBRATION. During conduct of temperature cycling, 3 G rms vibration shall be performed on equipment containing electronic material. The vibration shall be random for an accumulated time of 5 minutes in each axis. The item shall be energized during vibration and appropriate input signals applied to observe any abnormal conditions of the output functional characteristics.

Table 7.1 – **FIRST ARTICLE TESTS/QUALITY CONFORMANCE INSPECTIONS**

| SUBJECT | REQUIRE MENT | TEST METHOD | FIRST ARTICLE UNIT NO. | | | QUALITY CONFORMANCE |
|------------------------------------|-----------------|-----------------|------------------------------|---|---|------------------------|
| | | | 1 | 2 | 3 | |
| PHYSICAL INSPECTION | | | | | | |
| Size | 5.1 | 7.1 | X | X | X | X |
| Parts and Materials | 5.1 | 7.1 | X | X | X | X |
| Finish | 5.1 | 7.1 | X | X | X | X |
| Marking | 5.1 | 7.1 | X | X | X | X |
| Workmanship | 5.4 | 7.1 | X | X | X | X |
| Packaging and Marking | Contr Sect D | Contr Sect D | X | X | X | X |
| OPERATION: | | | | | | |
| Performance Verification | Section 3 | 7.3.1 | X | X | X | see note 1 |
| Operational Check | Section 3 | 7.3.2 | X | X | X | X |
| Live Agent Response | 3.2.5 | 7.3.3 | | | X | |
| ENVIRONMENTAL | | | | | | |
| Transient Voltage and Frequency | 4.1 | 7.4.1 | X | X | | |
| Operating Temperature | 4.2 | 7.4.2 | X | | | |
| Storage Temperature | 4.3 | 7.4.3 | X | | | |
| Vibration | 4.4 | 7.4.4 | | X | | |
| Shock – Transit Drop | 4.5 | 7.4.5 | | X | | |
| Electromagnetic Interference | 4.6 | 7.4.6 | X | | | |

PS/01/8855/002

05 June 2001

| | | | | | | |
|---------------------|-----|-------|---|---|---|---|
| Humidity | 4.7 | 7.4.7 | | X | | |
| Salt Fog | 4.8 | 7.4.8 | | X | | |
| WORKMANSHIP SCREEN | | | | | | |
| Temperature cycling | 5.6 | 7.5.1 | X | X | X | X |
| Random Vibration | 5.6 | 7.5.2 | X | X | X | X |

Note 1: The Verification of operating time (see 3.5 & 7.3.1) need only be performed on one first article unit.

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TECHNICAL MANUAL

FOR

**SHIPBOARD AUTOMATIC CHEMICAL AGENT
DETECTOR AND ALARM
(SHIPBOARD ACADA)
MK 27 MOD 0
NSN 6665-01-484-7823**

**SYSTEM DESCRIPTION
OPERATION AND MAINTENANCE**



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|---------------------|-------------|
| Title | 0 |
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| Change Record | 0 |
| i | 0 |
| ii | 0 |
| iii-v | 0 |
| vi-xi | 0 |
| 1-0 to 1-4 | 0 |
| 2-1 to 2-8 | 0 |
| 3-1 to 3-6 | 0 |
| 4-1 to 4-6 | 0 |
| 5-1 to 5-5 | 0 |
| 6-1 to 6-2 | 0 |
| 7-1 | 0 |
| 8-1 to 8-2 | 0 |
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PREFACE

The threat and increasing risk associated with chemical warfare (CW) agent attacks is addressed in OPNAVINST 3400.10F, Chemical Warfare and Chemical, Biological, and Radiological Defense (CW/CBR-D) policy document, which requires deployable U.S. Navy surface ships and high-threat overseas shore installations (as assessed by the Director on Naval Intelligence and Fleet Commanders-in-Chief (FLTCINCs)) to be provided with Chemical, Biological, and Radiological (CBR) defense capabilities. The Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA) is a man-portable point detection system used by Naval forces to detect low-level concentrations of chemical agent vapor contamination for both interior and exterior spaces of the ship. It detects nerve (G, V) and blister (H) chemical warfare agents and provides both visual and audible alarm within 60 seconds. The most important operational feature of Shipboard ACADA is that it is able to differentiate between chemical agents and common shipboard interferents.

Operational use on ship provides alarm and agent identification to Damage Control postattack survey teams, who can notify the Commanding Officer of the presence of CW agent contamination following a chemical attack. Real-time monitoring also provides information about the onset and duration of the attack. Shipboard ACADA can also be used to determine when filter change-outs for collective and personal protective equipment are required.

This manual provides users with instructions for operating and maintaining Shipboard ACADA. The information provided includes physical and functional descriptions of Shipboard ACADA, instructions for use, and information and procedures needed for scheduled and corrective maintenance at the organizational level. Procedures for intermediate and depot-level maintenance are not included in this manual.

The equipment described in this manual was developed and tested by the Naval Surface Warfare Center Dahlgren Division (NSWCDD) and approved by the Naval Sea Systems Command (NAVSEA).

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SW073-AF-MMO-010/MK 27 MOD 0

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TABLE OF CONTENTS

3-3.1.2 Signal Acquisition and Analysis 3-2

Chapter/Paragraph Page

1 GENERAL INFORMATION AND SAFETY PRECAUTIONS

| | | |
|---------|---|-----|
| 1-1 | SAFETY PRECAUTIONS | 1-1 |
| 1-2 | INTRODUCTION | 1-1 |
| 1-3 | EQUIPMENT DESCRIPTION .. | 1-1 |
| 1-3.1 | System Description | 1-1 |
| 1-3.2 | System Hardware | 1-2 |
| 1-3.2.1 | Detector Unit (DU) | 1-2 |
| 1-3.2.2 | Battery Pack | 1-2 |
| 1-4 | REFERENCE DATA | 1-2 |
| 1-5 | EQUIPMENT, ACCESSORIES, AND DOCUMENTS SUPPLIED | 1-3 |

2 OPERATION

| | | |
|-----------|--|-----|
| 2-1 | INTRODUCTION | 2-1 |
| 2-2 | CONTROLS AND INDICATORS | 2-1 |
| 2-2.1 | Description of Controls | 2-1 |
| 2-2.1.1 | DU Control Switch | 2-2 |
| 2-2.1.2 | DU Alphanumeric Display | 2-2 |
| 2-2.1.3 | Audible Alarm | 2-2 |
| 2-2.1.4 | Alarm Silence | 2-2 |
| 2-2.1.5 | Battery Display | 2-2 |
| 2-3 | NORMAL OPERATION | 2-2 |
| 2-3.1 | System Operation | 2-2 |
| 2-3.1.1 | activating the System | 2-3 |
| 2-3.1.2 | Warmup Mode | 2-4 |
| 2-3.1.3 | Purge Mode | 2-4 |
| 2-3.1.4 | Run Sampling Mode | 2-4 |
| 2-3.1.4.1 | Menu Selection | 2-4 |
| 2-3.1.4.2 | Wand Assembly | 2-4 |
| 2-3.1.4.3 | Detection of Chemical Agent Vapor | 2-4 |
| 2-3.1.4.4 | DU Built-in Test | 2-5 |
| 2-3.1.4.5 | Confidence Test | 2-5 |
| 2-3.1.5 | Manual Self-Test Mode | 2-5 |
| 2-3.1.5.1 | starting the Manual Self-Test | 2-5 |
| 2-3.1.5.2 | Leaving the Manual Self-Test Mode | 2-8 |
| 2-3.1.6 | deactivating the Detector Unit | 2-8 |

3 FUNCTIONAL DESCRIPTION

| | | |
|-----------|---------------------------------|-----|
| 3-1 | INTRODUCTION | 3-1 |
| 3-2 | PRINCIPLES OF OPERATION | 3-1 |
| 3-2.1 | Ion Mobility Spectroscopy (IMS) | 3-1 |
| 3-3 | FUNCTIONAL FLOW | 3-1 |
| 3-3.1 | Overall Level | 3-1 |
| 3-3.1.1 | System Air Flow Circuits | 3-1 |
| 3-3.1.1.1 | Sample Air Flow | 3-2 |
| 3-3.1.1.2 | Recirculating Air Flow | 3-2 |

| | |
|-------------------|--|
| Chapter/Paragraph | Page |
| 3-3.2 | Major Function Level |
| 3-3.2.1 | Detector Unit (DU) |
| 3-3.2.1.1.1 | Sample and Recirculating |
| 3-3.2.1.1.2 | Pumps |
| 3-3.2.1.2 | Membrane Assembly |
| 3-3.2.1.3 | Ion Mobility Spectroscopy (IMS) Cells |
| 3-3.2.1.4 | Desiccant Cartridge |
| 3-3.2.1.5 | Acetone Reagent Source |
| 3-3.2.1.6 | Detector Unit (DU) Electronics |
| 3-3.2.1.7 | Heaters |
| 3-3.2.1.8 | System Controls |
| 3-3.2.1.9 | Wand Assembly |

4 SCHEDULED MAINTENANCE

| | | |
|---------|--|-----|
| 4-1 | INTRODUCTION | 4-1 |
| 4-2 | SCHEDULED MAINTENANCE ACTIONS | 4-1 |
| 4-2.1 | Manual Self-Test and Confidence Test | 4-1 |
| 4-2.1.1 | Tools, Parts, Materials, Test Equipment | 4-1 |
| 4-2.1.2 | Perform Manual Self-Test | 4-1 |
| 4-2.1.3 | Perform Confidence Test | 4-3 |
| 4-2.2 | Restore Battery to Maximum Charge | 4-4 |
| 4-2.3 | Filter Removal and Replacement | 4-4 |
| 4-2.3.1 | Preliminary: De-energize System | 4-4 |
| 4-2.3.2 | Remove and Replace Detector Unit (DU) Filters | 4-5 |
| 4-2.3.3 | Remove and Replace DU Particulate Intake Filter | 4-6 |

5 CORRECTIVE MAINTENANCE

| | | |
|---------|--|-----|
| 5-1 | INTRODUCTION | 5-1 |
| 5-2 | OPERATOR TROUBLE- SHOOTING | 5-1 |
| 5-3 | CORRECTIVE ACTIONS | 5-2 |
| 5-3.1 | Desiccant Filter Removal and Replacement | 5-2 |
| 5-3.2 | Installation and Removal Of Purge Filter Assembly | 5-4 |
| 5-3.2.1 | Installation | 5-4 |
| 5-3.2.2 | Removal | 5-4 |
| 5-3.3 | Installation and Removal of Wand Assembly | 5-5 |
| 5-3.3.1 | Installation | 5-5 |
| 5-3.3.2 | Removal | 5-5 |

6 PARTS LIST

| | | |
|-----|--------------------------|-----|
| 6-1 | INTRODUCTION | 6-1 |
| 6-2 | LIST OF MANUFACTURERS .. | 6-1 |
| 6-3 | SPARE PARTS LIST | 6-1 |

TABLE OF CONTENTS (Continued)

| <i>Chapter/Paragraph</i> | <i>Page</i> |
|--|-------------|
| 7 UNPACKING, INSTALL/SETUP/POWER UP PROCEDURES | |
| 7-1 INTRODUCTION | 7-1 |
| 7-2 UNPACKING INSTRUCTIONS | 7-1 |
| 7-2.1 Detector Unit (DU)..... | 7-1 |
| 7.3 Packing | 7-1 |
| 8 REMOVAL AND RETURN PROCEDURE | |
| 8-1 INTRODUCTIO | 8-1 |
| 8-2 PACKING INSTRUCTIONS | 8-1 |
| 8-3 MARKING INSTRUCTIONS | 8-1 |
| 8-4 SHIPPING INSTRUCTIONS | 8-2 |
| 1-3 Shipboard ACADA Automatic Chemical Agent Detector and Alarm Equipment, Accessories, and Documents Supplied | 1-3 |
| 2-1 Control and Indicator Functions | 2-1 |
| 2-2 Summary of Battery Display Messages | 2-2 |
| 2-3 Shipboard ACADA Operational Guidelines | 2-3 |
| 2-4 Summary of General Operating Messages. | 2-6 |
| 2-5 Diagnostic Mode Messages | 2-8 |
| 5-1 Shipboard ACADA Troubleshooting Chart..... | 5-1 |
| 6-1 List of Manufacturers | 6-1 |
| 6-2 Spare Parts List | 6-2 |
| 8-1 Shipboard ACADA Removal Summary Checklist | 8-1 |

LIST OF ILLUSTRATIONS

| <i>Figure</i> | <i>Page</i> |
|--|-------------|
| S-1 U.S. Nuclear Regulatory Commission's NOTICE TO EMPLOYEES | vii |
| 1-1 Shipboard ACADA Automatic Chemical Agent Detector and Alarm (Shipboard ACADA)..... | x |
| 1-2 Shipboard ACADA Controls and Indicators Diagram | xi |
| 3-1 System Air Flow Diagram | 3-3 |
| 3-2 Shipboard ACADA with Wand Assembly | 3-6 |
| 4-1 Detector Unit (DU), Front View | 4-2 |
| 4-2 Intake Particulate Filter | 4-6 |
| 5-1 Shipboard ACADA Interior View | 5-3 |
| 5-2 Purge Filter and Intake Particulate Filter Assemblies..... | 5-4 |
| 5-3 Wand Assembly | 5-5 |

LIST OF TABLES

| <i>Table</i> | <i>Page</i> |
|---|-------------|
| 1-1 Shipboard ACADA Controls and Indicators Diagram | xi |
| 1-2 Reference Data | 1-2 |

SAFETY SUMMARY

The following are general safety precautions that are not related to any specific procedures and therefore do not appear elsewhere in this publication. These are recommended precautions that personnel must understand and apply during many phases of operation and maintenance.

KEEP AWAY FROM LIVE CIRCUITS

Operating personnel must at all times observe all safety regulations. Do not replace components or make adjustments inside the equipment with the high voltage supply turned on. Under certain conditions, dangerous potentials may exist when the power control is in the off position, due to charges retained by capacitors. To avoid casualties, always remove power and discharge and ground a circuit before touching it.

DO NOT SERVICE OR ADJUST ALONE

Under no circumstances should any person reach into or enter the enclosure for the purpose of servicing or adjusting the equipment except in the presence of someone who is capable of rendering aid.

RESUSCITATION

Personnel working with or near high voltages should be familiar with modern methods of resuscitation. Such information may be obtained from the Bureau of Medicine and Surgery.

RADIATION HAZARD: AMERICIUM-241 (Am^{241})

The two ion mobility spectroscopy (IMS) cells in the Detector Unit (DU) contain Am^{241} , a source of alpha radiation (total, 220 microcuries [Ci]). The IMS cells are potentially dangerous when opened or broken. The IMS cells should be removed and serviced only at the depot. If exposed to this radiation hazard, see your ship's medical officer and report the incident to your ship's safety officer. Figure S-1 illustrates the U.S. Nuclear Regulatory Commission's Notice to Employees.

HIGH VOLTAGE COMPONENTS

The drift tube assembly has 2000-V direct current (DC) across it. The pumps and electronics operate on 28-V direct current (DC). The battery charger operates with 100-V alternating current (AC) input. Therefore, great care should be taken around this instrument, and the instrument case should never be opened while powered up.

The following warnings and cautions appear in the text in this volume, and are repeated here for emphasis.

WARNING

After exposure to a chemical warfare environment, the detector must be operated for at least 24 hr after the last exposure to chemical agents before maintenance actions 1, 2, or 3 can be safely performed without risk of causing personal injury. This period allows any ingested agent to be captured by the charcoal in the desiccant cartridge assembly. If biological agents have been used, wear a gas mask and rubber gloves when removing the intake filter, and place the old filter in a sealed plastic bag and dispose of it. (Page 4-4)

WARNING

Never use any cleaners, soap, solvents, or cloth rags when cleaning any part of the detector. Use of anything except clean paper towels and fresh water will result in system contamination. The introduction of any contaminant may have a significant effect on the ability of the system to detect chemical agent vapors. The contaminant may cause the system to false-alarm, report errors, incorrectly identify a chemical agent vapor sample, or not alarm at all if chemical agent vapors are present. (Page 4-5)

WARNING

After opening new desiccant cartridge package, never touch the new desiccant cartridge around the screw threads or cartridge seating area. This will result in system contamination. Personnel must always have clean, grease-free and oil-free hands while performing this maintenance action. (Page 4-6)

WARNING

The two ion mobility spectroscopy (IMS) cells in each detector contain americium-241, a source of alpha radiation (total per detector is 220 microcuries). The IMS cells are potentially dangerous when opened or broken. The IMS cells should be removed from the detector and serviced only at the depot. If exposed to this radiation hazard, see your ship's medical officer and report the incident to your ship's safety officer. (Page 7-1)

NRC Form 3
(8/1999)
Part 1

UNITED STATES NUCLEAR REGULATORY COMMISSION
Washington, DC 20555-0001

NOTICE TO EMPLOYEES

STANDARDS FOR PROTECTION AGAINST RADIATION (PART 20); NOTICES; INSTRUCTIONS AND REPORTS TO WORKERS; INSPECTIONS (PART 19); EMPLOYEE PROTECTION



WHAT IS THE NUCLEAR REGULATORY COMMISSION?

The Nuclear Regulatory Commission is an independent Federal regulatory agency responsible for licensing and inspecting nuclear power plants and other commercial uses to radioactive materials.

WHAT DOES THE NRC DO?

The NRC's primary responsibility is to ensure that workers and the public are protected from unnecessary or excessive exposure to radiation and that nuclear facilities, including power plants, are constructed to high quality standards and operated in a safe manner. The NRC does this by establishing requirements in Title 10 of the Code of Federal Regulations (10 CFR) and in licenses issued to nuclear users.

WHAT RESPONSIBILITY DOES MY EMPLOYER HAVE?

Any company that conducts activities licensed by the NRC must comply with the NRC's requirements. If a company violates NRC requirements, it can be fined or have its license modified, suspended or revoked.

Your employer must tell you which NRC radiation requirements apply to your work and must post NRC Notices of Violation involving radiological working conditions.

WHAT IS MY RESPONSIBILITY?

For your own protection and the protection of your co-workers, you should know how NRC requirements relate to your work and should obey them. If you observe violations of the requirements or have a safety concern, you should report them.

WHAT IF I CAUSE A VIOLATION?

If you engaged in deliberate misconduct that may cause a violation of the NRC requirements, or would have caused a violation if it had not been detected, or deliberately provided inaccurate or incomplete information to either the NRC or to your employer, you may be subject to enforcement action. If you report such a violation, the NRC will consider the circumstances surrounding your reporting in determining the appropriate enforcement action, if any.

HOW DO I REPORT VIOLATIONS AND SAFETY CONCERNS?

If you believe that violations of NRC rules or the terms of the license have occurred, or if you have a safety concern, you should report them immediately to your supervisor. You may report violations or safety concerns directly to the NRC. However, the NRC encourages you to raise your concerns with the

licensee since it is the licensee who has the primary responsibility for, and is most able to ensure, safe operation of nuclear facilities. If you choose to report your concern directly to the NRC, you may report this to an NRC inspector or call or write to the NRC Regional Office serving your area. If you send your concern in writing, it will assist the NRC in protecting your identity if you clearly state in the beginning of your letter that you have a safety concern or that you are submitting an allegation. The NRC's toll-free SAFETY HOTLINE for reporting safety concerns is listed below. The addresses for the NRC Regional Offices and the toll-free telephone numbers are also listed below.

WHAT IF I WORK WITH RADIOACTIVE MATERIAL OR IN THE VICINITY OF A RADIOACTIVE SOURCE?

If you work with radioactive materials or near a radiation source, the amount of radiation exposure that you are permitted to receive may be limited by NRC regulations. The limits on your exposure are contained in sections 20.1201, 20.1207, and 20.1208 of Title 10 of the Code of Federal Regulations (10 CFR 20) depending on the part of the regulations to which your employer is subject. While these are the maximum allowable limits, your employer should also keep your radiation exposure as far below those limits as "reasonably achievable."

MAY I GET A RECORD OF MY RADIATION EXPOSURE?

Yes. Your employer is required to advise you of your dose annually if you are exposed to radiation for which monitoring was required by NRC. In addition, you may request a written report of your exposure when you leave your job.

HOW ARE VIOLATIONS OF NRC REQUIREMENTS IDENTIFIED?

NRC conducts regular inspections at licensed facilities to assure compliance with NRC requirements. In addition, your employer and site contractors conduct their own inspections to assure compliance. All inspectors are protected by Federal law. Interference with them may result in criminal prosecution for a Federal offense.

MAY I TALK WITH AN NRC INSPECTOR?

Yes. NRC inspectors want to talk to you if you are worried about radiation safety or have other safety concerns about licensed activities, such as the quality of construction or operations at your facility. Your employer may not prevent you from talking with an inspector. The NRC will make all reasonable efforts to protect your identity where appropriate and possible.

MAY I REQUEST AN INSPECTION?

Yes. If you believe that your employer has not corrected violations involving radiological working conditions, you may request an inspection. Your request



▲ - Callaway Plant Site in Missouri and Grand Gulf Plant Site in Mississippi are under the purview of Region IV. The Paducah Gaseous Diffusion Plant in Kentucky is under the purview of Region III.

should be addressed to the nearest NRC Regional Office, which will describe the alleged violation in detail. You or your representative must sign it.

HOW DO I CONTACT THE NRC?

Figure 3-4 NRC Nuclear Regulatory Commission's NOTICE TO EMPLOYEES

Talk to an NRC inspector on-site or call or write to the nearest NRC Regional Office in your geographical area (see map below). If you call the NRC's toll-free SAFETY HOTLINE during normal business hours, your call will automatically be directed to the NRC Regional Office for

your geographical area. If you call after normal business hours, your call will be directed to the NRC's Headquarters Operations Center, which is manned 24 hours a day.

CAN I BE FIRED FOR RAISING A SAFETY CONCERN?

Federal Law prohibits an employer from firing or otherwise discriminating against you for bringing safety concerns to the attention of your employer or the NRC. You may not be fired or discriminated against because you:

- ask the NRC to enforce its rules against your employer;
- refuse to engage in activities which violate NRC requirements;
- provide information or are about to provide information to the NRC or your employer about violations of requirements or safety concerns;
- are about to ask for, or testify, help, or take part in an NRC, Congressional, or any Federal or State proceeding.

WHAT FORMS OF DISCRIMINATION ARE PROHIBITED?

It is unlawful for an employer to fire you or discriminate against you with respect to pay, benefits, or working conditions because you help the NRC or raise a safety issue or otherwise engage in protected activities. Violations of Section 211 of the Energy Reorganization Act (ERA) of 1974(42 U.S.C. 5851) include actions such as harassment, blacklisting, and intimidation by employers of (i) employees who bring safety concerns directly to their employers or to the NRC; (ii) employees who have refused to engage in an unlawful practice, provided that the employee has identified the illegality to the employer; (iii) employees who have testified or are about to testify before Congress or in any Federal or State proceeding regarding any provision (or proposed provision) of the ERA or the Atomic Energy Act (AEA) of 1954; (iv) employees who have commenced or caused to be commenced a proceeding for the administration or enforcement of any requirement imposed under the ERA or AEA or who have, or are about to, testify, assist, or participate in such a proceeding.

HOW DO I FILE A DISCRIMINATION COMPLAINT?

If you believe that you have been discriminated against for bringing violations or safety concerns to the NRC or your employer, you may file a complaint with the NRC or the U.S. Department of Labor (DOL) if you desire a personal remedy, you must file a complaint with the DOL pursuant to Section 211 of the ERA. Your complaint to the DOL must describe in detail the basis for your belief that the employer discriminated against you on the basis of your protected activity, and it must be filed in writing either in person or by mail within 180 days of the

discriminatory occurrence. Additional information is available at the DOL website at www.osha.gov. Filing an allegation, complaint, or request for action with the NRC does not extend the requirement to file a complaint with the DOL within 180 days. You must file the complaint with the DOL. To do so you may contact the Allegation Coordinator in the appropriate NRC Region, as listed below, who will provide you with the address and telephone number of the correct OSHA Regional office to receive your complaint. You may also check your local telephone directory under the U.S. Government listings for the address and telephone number of the appropriate OSHA Regional office.

WHAT CAN THE DEPARTMENT OF LABOR DO?

If your complaint involves a violation of Section 211 of the ERA by your employer, it is the DOL, NOT THE NRC, that provides the process for obtaining personal remedy. The DOL will notify your employer that a complaint has been filed and will investigate your complaint.

If the DOL finds that your employer has unlawfully discriminated against you it may order that you be reinstated, receive back pay, or be compensated for any injury suffered as a result of the discrimination and be paid attorney's fees and costs.

Relief will not be awarded to employees who engage in deliberate violations of the Energy Reorganization Act or the Atomic Energy Act.

WHAT WILL THE NRC DO?

The NRC will evaluate each allegation of harassment, intimidation, or discrimination. Following this evaluation, an investigator from the NRC's Office of Investigations may interview you and review available documentation. Based on the evaluation, and, if applicable, the interview, the NRC will assign a priority and a decision will be made whether to pursue the matter further through investigation. The assigned priority is based on the specifics of the case and its significance relative to other ongoing investigations. The NRC may not pursue an investigation to the point that a conclusion can be made whether the harassment, intimidation, or discrimination actually occurred. Even if NRC decides not to pursue an investigation, if you have filed a complaint with DOL the NRC will monitor the results of the DOL investigation.

If the NRC or DOL finds that unlawful discrimination has occurred, the NRC may issue a Notice of Violation to your employer, impose a fine, or suspend, modify, or revoke your employer's NRC license.

*Figure S-1. U.S. Nuclear Regulatory Commission's NOTICE TO EMPLOYEES
(Continued)*

UNITED STATES NUCLEAR REGULATORY COMMISSION REGIONAL OFFICE LOCATIONS

A representative of the Nuclear Regulatory Commission can be contacted by employees who wish to register complaints or concerns about radiological working conditions or other matters regarding compliance with Commission rules and regulations at the following addresses and telephone numbers.

REGIONAL OFFICES

| REGION | ADDRESS | TELEPHONE |
|--------|---|----------------|
| I | U.S. Nuclear Regulatory Commission, Region I 475 Allendale Road King of Prussia, PA 19406-1415 | (800) 432-1156 |
| II | U.S. Nuclear Regulatory Commission, Region II Atlanta Federal Center 61 Forsyth Street, S.W., Suite 23T85 Atlanta, GA 30303-3415 | (800) 577-8510 |
| III | U.S. Nuclear Regulatory Commission, Region III 801 Warrenville Road Lisle, IL 60532-4351 | (800) 522-3025 |
| IV | U.S. Nuclear Regulatory Commission, Region IV 611 Ryan Plaza Drive, Suite 400 Arlington, TX 76011-8064 | (800) 952-9677 |

| | |
|--|--|
| <p>To report safety concerns or violations of NRC requirements by your employer,</p> <p>telephone:</p> <p>NRC SAFETY HOTLINE</p> <p>1-800-695-7403</p> | <p>To report incidents involving fraud, waste, or abuse by an NRC employee or NRC contractor,</p> <p>telephone:</p> <p>OFFICE OF THE INSPECTOR GENERAL</p> <p>HOTLINE</p> <p>1-800-233-3497</p> |
|--|--|



Figure 1-1. Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA)

Table 1-1, Shipboard ACADA Controls and Indicators Diagram

| ITEM NO. | DESCRIPTION |
|----------|--|
| 1 | ENCLOSURE, DU |
| 2 | HANDLE |
| 3 | INTAKE PARTICULATE FILTER/ INTAKE PORT |
| 4 | HORN |
| 5 | RAIN HOOD, INTAKE |
| 6 | COM JACK |
| 7 | DU POWER IN JACK |
| 8 | POWER SUPPLY ASSEMBLY DISPLAY |
| 9 | DU POWER CABLE |
| 10 | POWER SUPPLY ASSY, DU POWER OUT JACK |
| 11 | AC POWER INTO BATT. |
| 12 | D.U. POWER ON/OFF SWITCH |
| 13 | INTAKE PROTECTIVE CAP LANYARD ASSEMBLY |
| 14 | CARRYING STRAP |
| 15 | EXHAUST PORT |
| 16 | EXHAUST PORT COVER |
| 17 | FAN |
| 18 | DU DISPLAY |
| 19 | DU MODE SELECT SWITCH |
| 20 | LANYARD RETAINER |
| 21 | SWITCH GAURD |

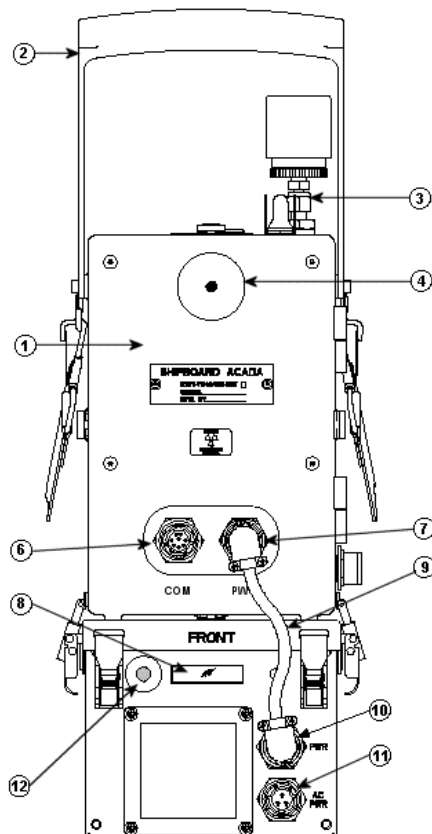
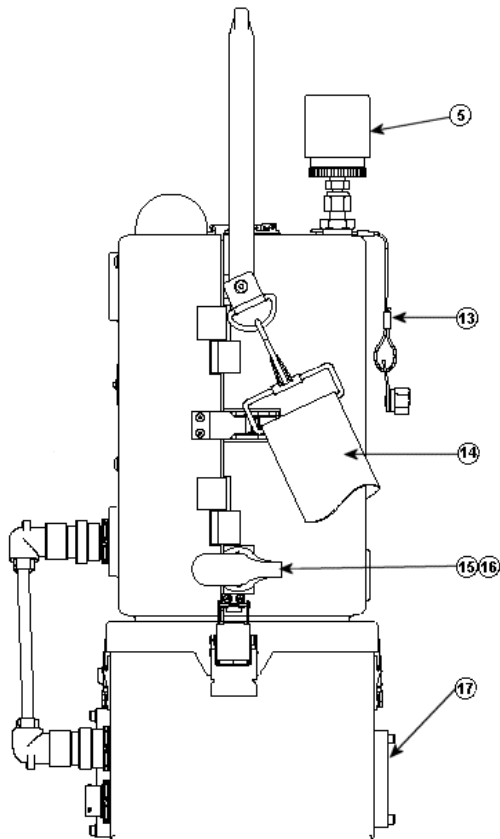
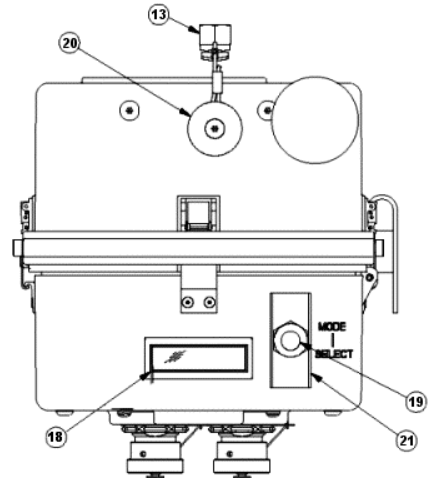


Figure 1-2, Shipboard ACADA Controls and Indicators diagram

CHAPTER 1

GENERAL INFORMATION AND SAFETY PRECAUTIONS

1-1 SAFETY PRECAUTIONS.

Personnel involved with the use and maintenance of the Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA) must comply with the safety precautions included in this manual. The Safety Summary provides general safety precautions, as well as specific warnings and cautions contained elsewhere in this manual.

1-2 INTRODUCTION.

This manual provides users with instructions for operating and maintaining Shipboard ACADA. The information provided includes physical and functional descriptions of Shipboard ACADA, instructions for use, and information and procedures needed for scheduled and corrective maintenance at the organizational level. Procedures for intermediate and depot-level maintenance are not included in this manual.

1-3 EQUIPMENT DESCRIPTION.

Shipboard ACADA is a man-portable point detection system used by U.S Naval forces to detect and alarm for chemical agent vapor contamination of the air in interior and exterior spaces of the ship. It responds to nerve (G, V) and blister (H) chemical warfare agents. The most important operational feature of Shipboard ACADA is that it monitors the ship's interior ambient air in real time and detects agents at low concentrations while ignoring the presence of common interferents. Audible and visual alarm occurs in less than 60 seconds (sec).

Operational use on ship provides alarm and agent identification to Damage Control postattack survey teams, who can notify the Commanding Officer of the presence of chemical warfare agent contamination following a chemical attack. Information provided from continuous internal ship monitoring can be used to determine when filter change-outs for collective and personal protective equipment are required.

1-3.1 System Description. Shipboard ACADA (figure 1-2) consists of a single Detector Unit (DU) housing. The housing contains a heated cell assembly, an alphanumeric display panel, pumps, sample and recirculating pneumatics, electronics, and an audible piezoelectric alarm. The detector housing couples directly to a battery pack containing a sealed lead-acid battery, which acts as the power source for the detector. The battery pack plugs into 110 V-AC ship's power to recharge the batteries and has an additional alphanumeric display to indicate the charge status of the batteries. The heated cell assembly contains the IMS cells, a desiccant cartridge assembly, and an acetone source. The cells implement ion mobility spectroscopy (IMS) technology to ionize the air samples. The electronic output of the IMS cells is digitally processed to look for the presence of chemical warfare agent vapors. If the presence of agent vapors is detected, a visual display message is sent to the alphanumeric display on top of the detector and a local audible alarm is sounded.

Shipboard ACADA is designed to be used as a shipboard man-portable postattack monitoring survey instrument that is operated by Damage Control Parties during heightened threat levels after an actual chemical attack, or for training.

1-3.2 System Hardware.

1-3.2.1 Detector Unit (DU). Enclosed in the DU (figure 1-2) are two IMS cells, all electronic circuitry and software required for detector operation, all software for signal analysis and system control, and two pumps with regulating valves that control the flow of air through the sample and recirculating flow paths.

The DU samples air through the sample intake port (figure 1-2) and divides the sample between two IMS cells that operate simultaneously to generate two different electronic waveforms or signals from the sample.

The computer software algorithm analyzes the two electronic signals generated by the IMS cells. Once the signals are analyzed, digital signals are sent to the alphanumeric display to show the appropriate messages or engage the audible alarm.

1-3.2.2 Battery Pack. When operating on ship's power 110 VAC (volts of alternating current), the battery will automatically begin charging until full charge status is reached. The battery will maintain full charge while the detector is connected to 110 VAC. Upon disconnect from 110 VAC, the batteries provide the power to operate the system for up to 2 hours. The charge status of the batteries is indicated on the battery pack display.

1-4 REFERENCE DATA.

Reference data concerning the physical and functional characteristics of Shipboard ACADA are provided in table 1-1.

Table 1-2. Reference Data

| Equipment | Power Requirements | Sensitivity | Flow Rates | Operating Temperature | Storage Temperature | Shelf Life |
|----------------------------|--------------------|---|-------------------|----------------------------|--------------------------------|------------------|
| Detector Unit (DU) (15 lb) | 10.5 VDC – 16 V DC | Alarm against nerve (G, V) vapors at 0.1 mg/m ³ and blister (H) vapors at 10 mg/m ³ within 60 sec | 2.0 L/m of sample | 0°C (32°F) to 50°C (122°F) | -40°C (-40°F) to 70°C (158°F) | Useful ship life |
| Battery Module (12 lb) | 12 Amp/hr | N/A | N/A | 0°C (32°F) to 50°C (122°F) | 40 °C (40 °F) to 70°C (158°F) | 180 days |

1-5 EQUIPMENT, ACCESSORIES, AND DOCUMENTS SUPPLIED.

Table 1-2 lists the equipment, accessories, and documents provided with Shipboard ACADA.

Table 1-3. Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA)

SW073-AF-MMO-010/MK 27 MOD 0

Equipment, Accessories, and Documents Supplied

| Nomenclature | Quantity | Part Number | Overall Dimensions | | | Weight (lb) |
|---|----------|----------------------|--------------------|-------------|--------------|-------------|
| | | | Length (in.) | Width (in.) | Height (in.) | |
| Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA) | 1 | 53711-7344570 | 7.5 | 7 | 18 | 26 |
| Detector Unit (DU) Assembly | 1 | 53711-7243432 | 6 | 6 | 12.5 | 14 |
| Desiccant Filter Assembly | 1 | 53711-7243490 | | | | |
| AC Power Cable | 1 | 53711-7343949 | | | | |
| DU Power Cable | 1 | 53711-7343948 | | | | |
| Power Supply Assembly | 1 | *53711-7343940 | 8 | 7 | 5.5 | 12 |
| Purge Filter Assembly | 1 | 53711-7344584 | | | | |
| Purge Filters | 6 | NSN 4240-01-206-1077 | | | | |
| Particulate Filter Assembly | 1 | 53711-7343945 | | | | |
| Particulate Filters | 10 | NSN 6640-01-323-5141 | | | | |
| Rain Hood Assembly | 1 | 53711-7243490 | | | | |
| Wand Assembly | 1 | 53711-7344583 | | | | |
| Tefzel Tubing | 5 Ft | .250 X .031 NAT EFTE | | | | |
| Carrying Strap | 1 | 10899 | | | | |
| Unit Container | 1 | 53711-7537885 | | | | |
| Stimulant Tube | 1 | NSN 6665-01-382-7081 | 1.5 | 1.5 | 5 | 0.5 |

| Nomenclature | Quantity | Part Number | Overall Dimensions | | | Weight (lb) |
|------------------|----------|----------------------|--------------------|-------------|--------------|-------------|
| | | | Length (in.) | Width (in.) | Height (in.) | |
| Technical Manual | 1 | NSN 0640-LP-022-5610 | 8.5 | .25 | 11 | 0.5 |

NOTE

*The Power Supply Assembly is a non-repairable item. It must be returned to Depot for all repairs.

CHAPTER 2

OPERATION

2-1 INTRODUCTION.

The Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA) is a man-portable point detection system designed for postattack monitoring or for use as an alarm during periods of elevated threat. As a point detector, Shipboard ACADA does not inform the operator of conditions everywhere on the ship; rather, it informs the operator of conditions present at the detector intake or sample probe, and provides warning at low agent vapor concentrations.

After a chemical attack, agent may be present both as liquid and a vapor cloud around all or part of the ship; or in the event of a near miss, the vapor cloud might be all that the ship encounters. Monitoring with Shipboard ACADA would alert the crew to the presence of the agent vapor. Detector paper would indicate the presence of liquid agent in ambient air, and on surfaces of the ship.

Chemical agent considered to pose the greatest threat may be divided into two groups: nerve agents, such as GA, GB, GD, and VX, and blister agent HD, which primarily attack the skin and respiratory system. All are extremely toxic: A few breaths of nerve agent vapor can be lethal, and small amounts of blister agent can cause severe burns. These agents, when present in liquid form, can also be absorbed through the skin with lethal results.

The Shipboard ACADA Detector Unit (DU) contains two ion mobility spectroscopy (IMS) cells, which have opposite polarities so that nerve and blister agent vapors can be detected simultaneously. The DU is maintained at an elevated temperature of 160°F to eliminate the effects of the ambient environmental conditions and to prevent condensation of the agent vapor in the system.

2-2 CONTROLS AND INDICATORS.

2-2.1 Description of Controls. Figure 1-2 identifies the system operator controls and indicators on the front of the Detector, numerically cross-referenced to table 2-1, which describes the function of each control and indicator. The functions of the controls and indicators on the DU are summarized in the paragraphs that follow.

Table 2-1. Control and Indicator Functions (refer to figure 1-2)

| Index No. | Nomenclature | Function |
|------------------|-------------------------------|--|
| 19 | DU Control Switch | Controls operational modes |
| 8 | Alphanumeric Battery Display | Indicates charge state of battery in the battery housing |
| 4 | Audible Alarm | Local audible signal to alert operator to the presence of agent vapor. |
| 18 | Alphanumeric Detector Display | Indicates operational status of DU and alarm status |
| 12 | DU Power Pushbutton | Supplies power to DU (Pushbutton is located on battery module) |

2-2.1.1 DU Control Switch. Controls the operation of the DU.

2-2.1.2 DU Alphanumeric Display. The 8-character alphanumeric display (figure 1-2) indicates the operational status of the DU.

2-2.1.3 Audible Alarm. The audible alarm (item 4, figure 1-2) is a local, continuous, audible tone to alert the system operator to the presence of agent vapor. (Simulant alarm has an interrupted tone.)

2-2.1.4 Alarm Silence. The audible alarm can be manually silenced after it is activated by the presence of a chemical agent or simulant. The operator can turn off the alarm by pressing the toggle switch toward MODE, then selecting the SILENCE? option by pressing the toggle switch toward SELECT and then releasing it.

2-2.1.5 Battery Display. The battery alphanumeric display (item 8, figure 1-2) indicates the operational status of the battery. Table 2-2 explains the battery display messages.

Table 2-2. Summary of Battery Display Messages

| Message on Battery Display | Definition of Message | Mode |
|-----------------------------------|--|---------------------|
| Discharg | Battery is sole power source; battery operational | Battery only/ no AC |
| Bat low | Battery is low; needs to be recharged | Battery only/ no AC |
| (no display) | Battery depleted – needs to be recharged | Battery only/ no AC |
| Reset | Charging is not initialized. Disconnect and reconnect AC. (will go to bat check) | AC connected |
| Bat check | Battery charge level determination | AC connected |
| Charging | Charging battery | AC connected |
| Maintain | Battery fully charged – ready for operation | AC connected |
| (no display) | Battery fully charged – ready for operation | AC connected |
| Prq tapr | Battery disconnected – check fuses and relays | |
| C t luf | Battery disconnected – check fuses and relays | |

2-3 NORMAL OPERATION.

Shipboard ACADA is designed to be operated during periods of elevated threat or directly following a chemical attack. A list of operational guidelines is given in table 2-3. The paragraphs that follow describe normal operating procedures for Shipboard ACADA.

2-3.1 System Operation. Table 2-3 shows the general operational modes of Shipboard ACADA.

Table 2-3. Shipboard ACADA Operational Guidelines

| System Operational Modes | Selectable | System Status |
|--------------------------|------------|--|
| Off | No | DU not operational |
| Purge | No | DU not operational; system is encountering an interferent |
| warm-up | No | DU not operational: system reaches proper operating temperature |
| Run mode | Yes | DU operational: system will detect and alarm on chemical agents, Built-in Test (BIT) performed every 10 min. |
| Diag | Yes | DU system performs BIT continuously |

2-3.1.1 Activating the System.**WARNING**

Before connecting system AC power, ensure that the inlet and exhaust ports are uncovered. This will prevent pulling a vacuum on the sample inlet loop and avoid potential damage to pumps or membranes in the detector.

WARNING

Ensure AC power cord is attached to Power Supply Assembly BEFORE connecting to Ship's power. Electrical shock is possible, as the connector for the Power Supply Assembly has exposed pins.

NOTE

The Shipboard ACADA must be started on AC power. The Power Supply Assembly will not initiate without AC power. The DU internal heaters will not warm the unit to operating temperatures on Battery Power.

To start the system, the operator shall:

- Ensure INLET and EXHAUST PORTS are open.
- Connect DU to Power Supply Assembly by fastening the two large latches on either side of the Power Supply Assembly.
- Attach Purge Filter Assembly to Intake port on detector.
- Attach DU power cord to DU and Power Supply Assembly.
- Attach 6-foot AC power cord to Power Supply Assembly.
- Connect 6-foot AC power cord to AC power. (Ship's power).

- g. Press DU power pushbutton on battery box.
- h. System will automatically begin to warm up.
- i. When system has entered RUN mode, remove Purge Filter Assembly and install Intake Particulate Filter.
- j. Perform Confidence Test (see paragraph 4-2.1.3).

2-3.1.2 Warm-up Mode. The DU must reach and stabilize at an operating temperature of 160°F before it will correctly respond to the chemical agent vapors. Under normal ambient conditions, the initial warm-up period will take approximately 30 min. During this warm-up period, the DU will display the following message:

warm up

The DU will sense when it reached this initial operating temperature. After the warm-up process is completed, the DU will then display the following message:

run mode

2-3.1.3 Purge Mode. In purge mode, the DU is non-operational due to the presence of an interfering chemical. The DU will automatically begin clearing itself of the interferent, and will automatically switch into the run-sampling detection mode. While in the purge mode, the DU will display the following message:

Purge

2-3.1.4 Run-Sampling Mode. This is the normal operating status of the system for the detection of chemical agent vapors. If the system is operating correctly, the following message will be shown on the alphanumeric display (item 18, figure 1-2):

run mode

The system is now fully operational and will detect chemical agent vapors. The DU will display error messages if any system errors occur (table 2-5).

2-3.1.4.1 Menu Selection. System Operational Modes are shown on the alphanumeric display. Other selectable modes of operation may be viewed by depressing the system switch towards MODE and releasing it as the display moves to each menu choice. To select a particular mode, depress the switch toward SELECT and release. The name of the selected mode will appear on the alphanumeric display.

2-3.1.4.2 Wand Assembly

The wand assembly consists of 5 feet of tefzel tubing connected to a steel wand. To assemble this accessory to the detector you must first remove the rain hood from the intake. Then take the tubing end and screw this directly into the intake port. After this is done the wand can be hooked to the other end of the tefzel tubing. (Refer to figure 5-3).

2-3.1.4.3 Detection of Chemical Agent Vapor. If the DU determines and validates presence of a chemical agent, it automatically generates an alarm state. In this state, the audible alarm (item 4, figure 1-2) will sound a continuous audible signal. The following visual alarm message will be shown on the alphanumeric display (item 18, figure 1-2):

GA det, or

GB det, or

GD/GF det, or

VX det, or

HD det, or

The alphanumeric display will alternate between messages if more than one agent is detected. The alarms will continue until the agent(s) is no longer detected. The operator may choose to silence the audible alarm manually.

- a. Press the DU switch toward MODE until SILENCE? is displayed; and release it. Select SILENCE by pressing the switch toward SELECT. The switch is spring-loaded and will automatically return to a neutral position.

The audible alarm will not sound again unless the DU detects another agent type. The alphanumeric display will continue to show the agent detection messages above until the DU no longer detects the presence of the agent vapor and automatically cancels the message.

2-3.1.4.4 DU Built-in Test. Every 10 minutes, the DU will automatically check its operational status by entering the DIAGNOSTIC mode and reporting updated status information. When the DU enters the diagnostic mode, the DU will display the following:

diagmode

Diagnostic messages will automatically be displayed. The diagnostic messages displayed under normal operating conditions are:

samp ok or samp hi
rec ok or rec hi
temp ok

After all diagnostic messages have been displayed, the DU will automatically return to the run mode. The DU will display the following:

run mode

2-3.1.4.5 Confidence Test. The Confidence Test is performed periodically as part of scheduled maintenance, and is used to determine if the system is working properly and capable of detecting chemical agent vapors. Chemical agent simulant vapors are intentionally introduced into the sample inlet and, if the detector is operating properly, the DU will detect, alarm, and identify the simulants.

Proper Procedure for conducting the Confidence Test is provided in Chapter 4 of this manual.

2-3.1.5 Manual Self-Test Mode. To determine the operational status of the system at any time, the operator may initiate the DIAGNOSTIC mode. The results of the BIT will be shown on the alphanumeric display (item 18, figure 1-2). Note that while in the DIAGNOSTIC mode the DU is still fully operational and will still detect and alarm in the presence of chemical agents.

2-3.1.5.1 Starting the Manual Self-Test. The operator shall:

- a. Press and release system switch toward MODE until the display reads DIAGMODE?. Select DIAGNOSTIC mode by pressing the switch toward SELECT and then releasing it to select self test from the operating menu. The DU alphanumeric display will display:

Diagmode

indicating that the system is in the diagnostic mode. If there are no system errors, the detector will display the following messages at 5 second intervals:

samp ok or samp hi
rec ok or rec hi
temp ok

Diagnostic mode can be selected from warm-up, run, or purge mode.

b. To manually scroll through the diagnostic messages, press and release the system switch toward MODE until the display reads SCROLL?. Select SCROLL mode by pressing the switch toward SELECT and then releasing it. Each time the switch is pressed towards SELECT and released, the next error message is displayed. If the switch is not pressed toward SELECT and released, the messages will automatically scroll every 5 seconds.

To manually scroll through the message again, repeat step b.

The system will continue in DIAGNOSTIC mode and will continue running diagnostics until manually switched back into the run mode. If the scroll option is not chosen, or is ignored, the DU will continue to alternately display the mode and error messages at 5-second intervals. If there are errors to report, the DU will display the appropriate error messages as shown in table 2-5.

Summaries of the messages that may be displayed on the DU and their corresponding explanations are shown in Tables 2-5 and 2-6. Troubleshooting procedures in response to the error messages are given in Chapter 5 of this manual.

Table 2-4. Summary of General Operating Messages

| Message on DU | Definition of Message | Reference Paragraph |
|----------------------|---|----------------------------|
| Warm up | DU is on, but has not yet reached operating temperature and will not detect chemical agents. | 2-3.1.2 |
| Purge | DU has encountered a contaminant. Move DU to clean space and apply purge filter. | 2-3.1.3 |
| Run mode | DU fully operational. System will detect chemical agents. This is the message seen during normal operation | 2-3.1.4 |
| Diag mode | DU is in the diagnostic (BIT) mode. DU will run diagnostic and detect and alarm in the presence of chemical agents. | 2-3.1.4.4 |
| GA det | Alarm message. Chemical agent vapor has been detected and identified as GA type agent. | 2-3.1.4.3 |

| Message on DU | Definition of Message | Reference Paragraph |
|----------------------|---|----------------------------|
| GB det | Alarm message. Chemical agent vapor has been detected and identified as the GB- type agent. | 2-3.1.4.3 |
| GD/GF det | Alarm message. Chemical agent vapor has been detected and identified as GD or GF type-agent. | 2-3.1.4.3 |
| HD det | Alarm message. Chemical agent vapor has been detected and identified as HD-agent | 2-3.1.4.3 |
| VX det | Alarm message. Chemical agent vapor has been detected and identified as VX-agent. | 2-3.1.4.3 |
| DPM det | Alarm message. Simulant vapor has been detected and identified as the G- series simulant Dipropylene Glycol Monomethyl Ether (DPM). | 2-3.1.4.5 |
| MS det | Alarm message. Simulant vapor has been detected and identified as the H- series simulant Methyl Salicylate (MS). | 2-3.1.4.5 |
| Unk det | Alarm message. An unknown chemical is detected. | 2-3.1.4.5 |
| GA clr | Agent clear message. Chemical agent vapor levels have fallen below the detectable level for GA. | 2-3.1.4.4 |
| GB clr | Agent clear message. Chemical agent vapor levels have fallen below the detectable level for GB. | 2-3.1.4.4 |
| GD/GF clr | Agent clear message. Chemical agent vapor levels have fallen below the detectable level for GD or GF. | 2-3.1.4.4 |
| HD clr | Agent clear message. Chemical agent vapor levels have fallen below the detectable level for HD. | 2-3.1.4.4 |
| VX clr | Agent clear message. Chemical agent vapor levels have fallen below the detectable level for VX. | 2-3.1.4.4 |
| DPM clr | Simulant clear message. Chemical simulant vapor levels have fallen below the detectable level for DPM. | 2-3.1.4.5 |
| MS clr | Simulant clear message. Chemical simulant vapor levels have fallen below the detectable | 2-3.1.4.5 |

| Message on DU | Definition of Message | Reference Paragraph |
|---------------|---|---------------------|
| | level for MS. | |
| Unk clr | Unknown chemical clear message. Unknown chemical vapor has fallen below the detectable level. | 2-3.1.4.5 |
| SCROLL? | Selectable menu option to scroll through BIT error or alarm messages. | 2-3.1.5.1 |
| DIAGMODE? | Selectable menu option to enter the diagnostic mode | 2-3.1.5.1 |
| RUN MODE? | Selectable menu option to enter the chemical agent detection mode | 2-3.1.4 |
| PURGE? | Selectable menu option to enter into the purge mode. | 2-3.1.3 |
| SILENCE? | Selectable menu option to silence the audible detection alarm. | |

2-3.1.5.2 Leaving the Manual Self-Test Mode. To leave the Manual Self-Test Mode, the operator shall:

Press and release system switch toward MODE until it displays desired mode. Select mode option by pressing the switch toward SELECT and then releasing it to select Run mode from the operating menu. The DU alphanumeric display will display the mode entered.

2-3.1.6 Deactivating the Detector Unit. To turn off the DU

- Push the power button located on the Power Supply Assembly.
- If the detector is being shut down for long-term storage, remove the battery module from the detector and connect the battery module to AC until fully charged. (See paragraph 2-3.1.1 steps e and.f)

Table 2-5. Diagnostic Mode Messages

| Diagnostic Message | Description |
|--------------------|--|
| temp hi | Temperature of the IMS cells inside the DU is above nominal. |
| temp lo | Temperature of the IMS cells inside the DU is below nominal. |
| temp ok | Temperature of the IMS cells inside the DU is ok for proper operation. |
| no samp | Zero pressure reading from sampling system, or transducer failure. |
| samp lo | Pressure of the DU sampling system pump is below nominal. |

| | |
|--------------------|---|
| samp ok or samp hi | Pressure of the DU sampling system is within proper operating range. |
| no rec | Failure of the DU recirculating system or a blockage in the recirculating air circuit, or transducer failure. |
| rec low | Pressure of the DU recirculating system is below nominal. |
| rec ok or rec hi | Pressure of the DU recirculating system is within proper operating range |
| both flt | Neither DU IMS cell is producing proper IMS baseline signature. DU will not detect chemical agents or simulants. |
| pcel flt | DU positive IMS cell is not producing a proper IMS baseline signature. DU will not detect nerve agents or simulant. |
| ncel flt | DU negative IMS cell is not producing a proper IMS baseline signature. DU will not detect nerve agents or simulant. |
| both gates | Neither DU IMS cell is producing a proper IMS baseline signature. DU will not detect nerve agents or simulant. |
| pcel gate | Positive DU IMS cell is not producing proper IMS baseline signature. DU will not detect chemical agents or simulants. |
| ncel gate | Negative DU IMS cell is not producing proper IMS baseline signature. DU will not detect chemical agents or simulants. |
| pcel low | Positive IMS cell baseline signature peak amplitude is lower than proper range |
| ncel low | Negative IMS cell baseline signature peak amplitude is lower than proper range |
| p shift | Positive IMS cell baseline signature peak location is shifted out of proper range |
| n shift | Negative IMS cell baseline signature peak location is shifted out of proper range |
| desiccant | Desiccant cartridge is saturated. |

CHAPTER 3 FUNCTIONAL DESCRIPTION

3-1 INTRODUCTION.

This section provides a functional description of the Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA) operation. It includes descriptions of the basic principles of operation; as well a functional flow at both the overall and major function levels.

Shipboard ACADA consists of a Detector Unit (DU), and a Battery pack. The DU uses ion mobility spectroscopy (IMS) technology to analyze the air sample, and, if chemical agent vapors are detected, activates visual and audible alarms.

This system is designed to be used as a man-portable shipboard system to provide post-attack chemical agent contamination survey, as a point detector during heightened threat levels as a point detection system, or for training.

3-2 PRINCIPLES OF OPERATION.

3-2.1 Ion Mobility Spectroscopy (IMS). The basic concept of IMS is the production of ions in a vapor sample, and then the separation of those ions in an electric field. The terminal velocity of an ion in an electric field is a function of its charge and mass, atmospheric pressure, and molecular shape and size. Ion mobility is defined as how fast a particular ion can move through an electric field at a given temperature and pressure.

At atmospheric pressure, ions and molecules can cluster together in a way unique to the molecule producing the ions. This clustering does not need to be with similar molecules; these non-similar molecules are called reagents. The G-agent vapor molecules cluster with acetone molecules, forming positively charged cluster ions. The H-agent vapor molecules cluster with hydroxyl ions to form negatively charged cluster ions. A single-agent ion clustered with reagent molecules is called a monomer. A two- or three-agent molecule clustered with reagent molecules is called a dimer and trimer, respectively.

In this separation method, the ions start from rest at the same time to travel a known distance along a drift tube, across which a high-voltage gradient is applied. An electrode is located at the end of the drift tube to detect the ions. The smaller ion clusters have greater mobility and reach the end of the drift tube first. Heavier clusters arrive later, in order of mass. So, the arrival time is primarily a measure of the size of the cluster ions.

Each substance that is ionized produces a unique IMS signal. A substance can be identified by comparing its IMS signal, also called its IMS signature, with a set of previously recorded signatures of known substances (referred to as the "reference library"). If the substance's signature matches one of the known signatures in the "reference library," that substance can be identified. If no match occurs between the signature and the reference library, the substance is identified as unknown.

3-3 FUNCTIONAL FLOW.

3-3.1 Overall Level.

3-3.1.1 System AirFlow Circuits. The DU has a sample airflow circuit and a recirculating airflow circuit. Flow schematics for these are shown in Figure 3-1.

3-3.1.1.1 Sample Air Flow. The exterior sample airflow of 2.0 liters per minute (lpm) is received by the DU through the sample inlet port. Once inside the DU, the flow splits between the positive and negative IMS cells. At each IMS cell, the 1.0-lpm sample flow is directed across a semi-permeable membrane. A few molecules of the sample migrate through the membrane and are entrained in the recirculating airflow. The remaining sample air is immediately exhausted out of the detector.

3-3.1.1.2 Recirculating Air Flow. The 2.0-lpm recirculating airflow is provided to maintain a clean and dry condition inside the IMS cell. The recirculating air is routed through a desiccant cartridge containing 40% molecular sieve material and 60% activated bituminous product, low ash (BPL) charcoal to remove any contamination from the recirculating airflow. (See figure 3-1).

An acetone vapor source is included in the recirculating air flow circuit of the positive IMS cell. This vapor source provides a trace amount of the reagent molecules required for reaction with the G-agent vapor molecules to form positive cluster ions. The negative IMS cell does not need a separate reagent vapor source because there are enough residual water molecules in the air to form the hydroxyl ions needed to react with the H-agent molecules.

The sample molecules that migrate through the semi-permeable membrane become entrained in the recirculating air that contains reagent vapor molecules. This sample-reagent vapor mixture then enters the ionization region of the IMS cell. The ionization region is surrounded by a radioactive source of 110 uCi of americium-241 (Am^{241}), which gives off beta particles that collide with the mixture of sample-reagent molecules. The reagent molecules will ionize and react with the sample molecules to create ion clusters.

3-3.1.2 Signal Acquisition and Analysis. After ionization of the sample molecules, an electronic gate releases the ions into the drift region. The ions are separated as they travel through the electric field in the drift tube, and impact on the collector electrode at the end of the tube. As the ions impact on the collector electrode, they give up their charge and a small ion current is generated. The small ion current is amplified and converted to a digital voltage. The time-varying digital voltage of the ions at the collector electrode comprises the sample's IMS signature. The signature resembles a chromatogram with peaks occurring at unique drift times. The signature is taken repetitively and averaged over time to yield a relatively noise-free signature.

As explained in paragraph 3-2.1 above, each sample that can be ionized has a unique IMS signature. An algorithm that compares relative signature peak location(s) and amplitudes with a library of known IMS signatures analyzes the sample IMS signature. If there is a match with an agent of interest, audible and visual alarms are initiated to alert the operator.

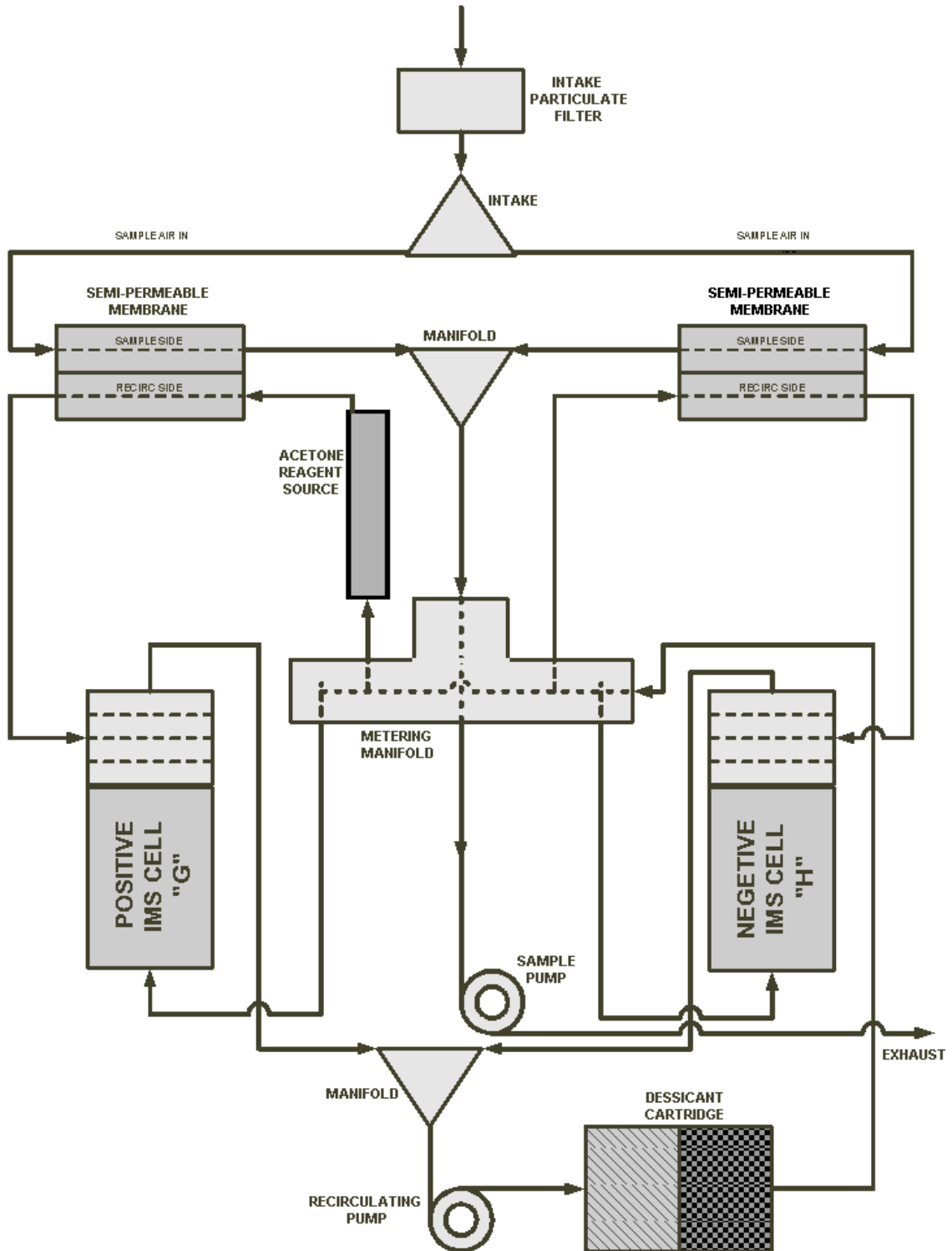
3.3.2 Major Function Level.

3-3.2.1 Detector Unit (DU). After the sample inlet collects the sample air, it enters the DU, where analysis of the sample is done using IMS.

The major components of the DU are described in the following paragraphs.

3-3.2.1.1 Sample and Recirculating Pumps. The sample and recirculating pumps are identical 12-VDC (volts direct current) centrifugal, graphite-vaned pumps. They move the air through the DU as described in 3-3.1.1.

Figure 3-1 System Airflow Diagram



3-3.2.1.2 Membrane Assembly. The sample air is drawn into the detector unit through a sample inlet housing where it is distributed among each membrane assemblies. As the sample air passes over the membrane, a few sample air molecules migrate through the membrane and get entrained in the recirculating airflows. These few molecules that pass through the membranes are the only part of the original ambient air sample that actually gets analyzed by the IMS cells.

There is a single membrane assembly for both of the IMS cells in the DU. The membrane assembly consists of a stainless steel mount that holds a 1.0-mil-thick membrane of dimethyl silicone/polycarbonate hybrid material. The purpose of the semi-permeable membrane is to selectively allow sample molecules of interest into the IMS cells while excluding excess water vapor.

Excess sample air that has passed the membrane without migrating is exhausted out of the detector.

3-3.2.1.3 Ion Mobility Spectroscopy (IMS) Cells. There are two IMS cells in each Shipboard ACADA operating simultaneously, one in the positive mode and the other in the negative mode. This capability allows the Shipboard ACADA to continuously detect both nerve and blister agent vapors. Each IMS cell consists of an ionization region, an electronic gate, the drift region, a collector assembly, the high-voltage printed circuit (PC) board, and the signal amplifier PC board.

The electronic gate controls the entry of the ion clusters into the drift region. The electronic gate is essentially two wire grids that are held at different potentials. This sets up an electric field that prevents the ion clusters from passing through into the drift region. In 30-millisecond (ms) intervals, a voltage is applied to the gate (positive voltage in the positive IMS cell and negative voltage in the negative IMS cell), which momentarily removes the potential difference between the grids. The gate “opens,” and a small, discrete group of ion clusters enters the drift region.

The drift region consists of 10 circular electrodes separated by insulating spacers. A potential difference from 0 to 2000 V (positive voltage in the positive IMS cell and negative voltage in the negative IMS cell) is applied across the drift region in approximately 200-V increments, creating a uniform electric field, which accelerates the ion clusters towards the collector assembly. As the ion clusters travel the length of the drift region, they separate, due to their different mobilities in the electric field, and arrive at the collector at different times, i.e.; the smaller ion clusters have greater mobility and reach the collector assembly ahead of the heavier clusters.

As the ion clusters impact on the collector assembly, they discharge and create a small ion current. This ion current is amplified and converted to a digital voltage signal, which is the IMS signature of the sample vapor. The IMS signature is then analyzed by a software algorithm to identify the sample.

3-3.2.1.4 Desiccant Cartridge. The recirculating air flowing through the DU must be clean and dry to ensure that the incoming sample vapor is not contaminated by any internal interferences. Therefore, the DU recirculating air circuit includes a desiccant cartridge that filters out all contaminants from the recirculating air.

The desiccant cartridge is filled with molecular sieve material (size 4A) and BPL charcoal (untreated, 6 x 16 mesh size). The molecular sieve material removes residual water vapor and the BPL charcoal removes any organic contaminants.

As the DU operates, the desiccant cartridge will slowly become loaded with contaminants and will be unable to maintain the clean and dry environment inside the recirculating air circuit. The average life of a desiccant cartridge is approximately 500 operating hours. The desiccant cartridge is easily removed and replaced by ship's personnel. The used cartridges can then be returned to the maintenance depot for refilling and reuse.

3-3.2.1.5 Acetone Reagent Source. As described in paragraph 3-3.2.1.3, the ion clusters are formed in the ionization region of the IMS cell by reactions between the sample vapor molecules and reactant ions.

An acetone vapor source is required in the recirculation airflow circuit for use by the positive IMS cell to maintain a stable baseline signature. The acetone vapor source consists of a Teflon diffusion tube immersed in 50 mL of liquid acetone contained in a stainless steel vessel that is mounted next to the positive IMS cell. Just prior to entering the positive IMS cell, the recirculating air passes through the immersed tube and the acetone molecules diffuse into the tube and mix with the recirculating air at a constant rate of approximately 675 mL/min at 160°F.

A separate reagent vapor source is not required for the negative IMS cell. A small amount of residual atmospheric water vapor migrates through the semi-permeable membrane with the sample vapor and enters the ionization region. These water molecules act as the reagent for the negative ion reactions.

3-3.2.1.6 Detector Unit (DU) Electronics. The electronic circuitry that controls the operation of the DU is located inside the front access cover of the DU enclosure. An analog-to-digital (A/D) converter, a central processing unit (CPU) and Digital Signal Processor (DSP) control the operation of the DU. These functions are resident on a single Printed Circuit (PC) board.

The A/D converter receives the analog voltages from the positive and negative IMS cells and converts them to digital signals, which are then sent to the DSP for processing.

The DSP is a Texas Instruments TMS320C30 that employs a software algorithm to analyze the digital signal from the A/D converter. If the algorithm detects the presence of a chemical of interest in the vapor sample, then it will identify the chemical, immediately sound the audible alarm to alert the operator, and send an appropriate display message to the alphanumeric detector display.

3-3.2.1.7 Heaters. The IMS cells must be maintained at a constant temperature of 160 °F to operate properly. A 100-W strip heater is mounted under each of the cells to maintain their temperature and heat the surrounding components to prevent the sample vapor from condensing as it travels through the DU. The enclosure housing the IMS cells is insulated with a high efficiency low-resistance material to reduce the duty cycle on the cell heaters and conserve battery life.

3-3.2.1.8 System Controls. The system controls are located directly on top of the detector unit enclosure box subassembly and contain the system switch and the alphanumeric display. The alphanumeric display provides real-time printed information to the operator regarding the status of the system, including alarm status, agent identification, Built-in Test (BIT) information, and error messages.

3-3.2.1.9 Wand Assembly

This is used for post-attack detection. The wand is used to draw sample vapors from specific points. This accessory consists of a wand connected to 5 feet of tefzel tubing; this is hooked directly into the intake, after the rain hood has been removed. The wand attaches to the Intake Particulate Filter. (See figure 3-2), for attachment instructions refer to paragraph 5-3.3.

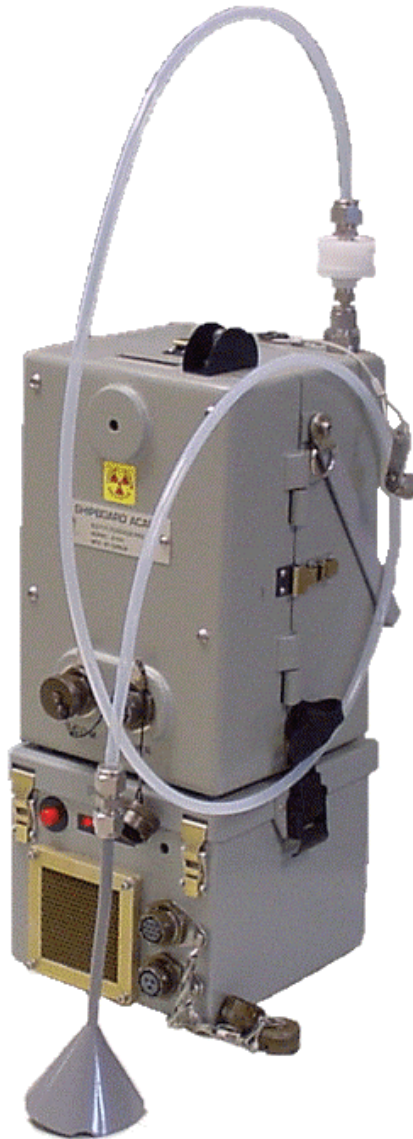


Figure 3-2, Shipboard ACADA with Wand Assembly

CHAPTER 4

SCHEDULED MAINTENANCE

4-1 INTRODUCTION.

This chapter provides scheduled maintenance procedures for the Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA). These procedures include a requirement that Shipboard ACADA be powered up for 30 minutes prior to deployment to ensure that Shipboard ACADA will be operational when it is needed.

NOTE

The Shipboard ACADA must be initiated into warm-up mode by AC power. Unit will enter RUN mode when it has reached operating temperature.

The scheduled maintenance instructions in this manual are intended to duplicate those furnished in the Planned Maintenance System (PMS). In case of conflicts, the PMS documentation takes precedence. Such conflicts should be reported immediately on the NAVSEA Technical Manual Deficiency/ Evaluation Report, in accordance with the maintenance procedures for this manual.

4-2 SCHEDULED MAINTENANCE ACTIONS.

4-2.1 Manual Self-Test and Confidence Test.

4-2.1.1 Tools, Parts, Materials, Test Equipment.

- a. Materials
 - 1. Confidence Sample (NSN 6665-01-382-7081)
- b. Miscellaneous
 - 1. NAVSEA Technical Manual

4-2.1.2 Perform Manual Self-Test.

NOTE

Accomplish quarterly or as required when operating system.

When Maintenance Requirement Card (MRC) A-1R coincides with this MRC, perform MRC A-1R only.

NOTE

Due to sensitivity of system to small amounts of sample vapors, all confidence tests should be performed when there are no vapor-producing activities ongoing in the vicinity of the detector (i.e., painting, floor waxing, weapons fire, etc.) or during extreme inclement weather. The introduction of any contaminant may have a significant effect on the ability of the system to detect chemical agent vapors. The contaminant may cause the system to false-alarm, report errors, incorrectly identify a chemical agent vapor sample, or not alarm at all if chemical agent vapors are present.



Figure 4-1. Detector Unit (DU), Front View

NOTE

Due to sensitivity of system to small amounts of sample vapors, ensure hands and clothing of personnel performing maintenance are free of all contaminants that may be detected (i.e., fuels, oils, greases, adhesives, solvents, paints, aftershave lotion, perfumes, hand lotions, etc.). The introduction of any contaminant may have a significant effect on the ability of the system to detect chemical agent vapors. The contaminant may cause the system to false-alarm, report errors, incorrectly identify a chemical agent vapor sample, or not alarm at all if chemical agent vapors are present.

- a. Ensure external air intake and exhaust ports are open and free of obstructions.
- b. Activate the detector by first attaching the battery case to the bottom of the detector by securing the latches at the bottom of the DU and the top of the battery box (see figure 4-1).
- c. Once the battery case has been attached to the DU, power the battery box by connecting the AC power cable to the Ship's AC power (see figure 4-1).
- d. Next, connect the battery power from the battery to the DU via the DU cable (see figure 4-1).
- e. After the battery AC power cable and the DU cables have been connected, depress power button located on battery module.

NOTE

The system must be operating for 1/2 hr before initiating test.

- f. The system will automatically enter an initial warm-up mode for approximately one-half hour.
- g. System will automatically perform a built-in test and report its condition. Any error messages will be displayed on the alphanumeric display.
- h. Report all discrepancies to Work Center Supervisor (WCS).

NOTE

All deficiencies must be corrected per Shipboard ACADA Technical Manual (SW073-AF-MMO-010/MK 27 MOD 0) before performing Confidence Test.

4-2.1.3 Perform Confidence Test.

NOTE

Once the system is ready to detect chemical agents or simulants, the DU will enter the run mode.

- a. Remove raincap if installed on intake particulate filter assembly.
- b. Open "G" end of confidence sample and place opening in contact with sample inlet on top of detector (See figure 4-1). Hold confidence sample in place for approximately 2 seconds. Remove

and close end of confidence sample.

- c. If alarm sounds before 30 sec, nerve agent detection is fully operational.
- d. After completion of Confidence Test, system can be turned off if not needed. To turn off system, remove the battery box.

NOTE

If simulant was not detected within 60 sec, it is likely that the confidence sample has degraded or there is an interferent (paint fumes, floor wax, etc.) in the area, or the desiccant cartridge needs replacement(4-2.3.3). Repeat steps d., e., and f. with a fresh confidence sample. If unit still does not alarm, power down the system install purge filter assembly and run unit until it enters run mode. Then, try again. Up to four tries may be necessary with degraded confidence samples.

NOTE

Rapid degradation of confidence samples will occur if ends of confidence sample are left open for prolonged periods.

- e. Allow unit to clear itself for approximately 5 min, and then repeat test using "H" end of confidence sample. If alarm sounds before 30 sec, blister agent detection is fully operational.

4-2.2 Restore Battery to Maximum Charge

- a. Plug battery module into AC power.
- b. Wait until "maintain" is displayed (usually overnight).

4-2.3 Filter Removal and Replacement.

4-2.3.1 Preliminary: De-Energize System.

WARNING

After Shipboard ACADA exposure to a chemical warfare environment, the DU must be operated for at least 24 hr after the last exposure to chemical agents before maintenance actions 1, 2, or 3 can be safely performed without risking personal injury. This time allows any ingested agent to be broken down and filtered out by the charcoal in the desiccant cartridge assembly.

NOTE

Accomplish annually or as required when operating system.

NOTE

When MRC Q-1R coincides with this MRC A-1R, perform A-1R MRC only.

NOTE

Report all discrepancies to Work Center Supervisor (WCS).

NOTE

Due to sensitivity of system to small amounts of sample vapors, all maintenance on Detector Unit (DU) should be performed when there are no vapor-producing activities ongoing on interior of ship (i.e., painting, floor waxing, etc.). The introduction of any contaminant may have a significant effect on the ability of the system to detect chemical agent vapors. The contaminant may cause the system to false-alarm, report errors, incorrectly identify a chemical agent vapor sample, or not alarm at all if chemical agent vapors are present

WARNING

Never use any cleaners, soap, solvents, or cloth rags when cleaning any part of the DU. Use of anything except clean paper towels and fresh water will result in system contamination. The introduction of any contaminant may have a significant effect on the ability of the system to detect chemical agent vapors. The contaminant may cause the system to false-alarm, report errors, incorrectly identify a chemical agent vapor sample, or not alarm at all if chemical agent vapors are present.

4-2.3.2 Remove and Replace Detector Unit (DU) Filters.

a. Miscellaneous

1. NAVSEA Shipboard ACADA Technical Manual (SW073-AF-MMO-010/MK 27 MOD 0)

b. Materials

1. Intake Particulate Filter Media.

4.2.3.3 Remove and Replace Detector Unit (DU) Intake Particulate Filter

- Grasp rain cap (if installed), and remove by rotating counterclockwise.
- Grasp top, ridged edge of the filter housing and lower, ridged edge of the filter housing. While holding the lower ridged edge of the filter housing to keep it from moving, rotate the top portion of the intake filter housing counterclockwise to loosen and remove it. (See figure 4-2).
- Remove the filter material from the upper half of the filter housing and dispose of it properly, making sure that the O-ring stays in place. Place new filter media onto the lower half of the filter housing on top of the screen mesh.
- Replace the top of the filter housing and finger tighten it by rotating it clockwise while holding the bottom of the filter housing in place. (See figure 4-2).
- Replace the rain cap (if used), by placing it on top of the filter housing and finger tightening the cap by rotating the cap clockwise.

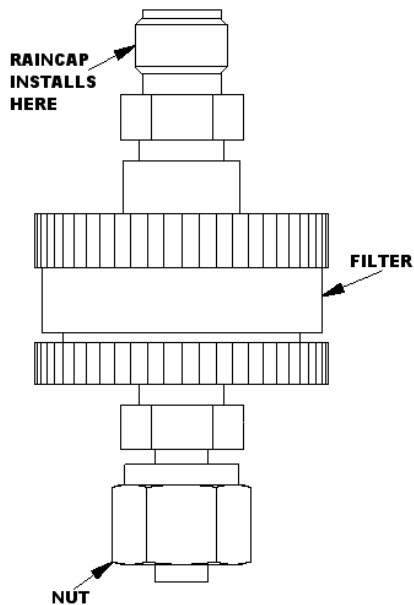


Figure4-2, Intake Particulate Filter

CHAPTER 5 CORRECTIVE MAINTENANCE

5-1 INTRODUCTION.

This chapter provides troubleshooting and corrective action procedures to be used by the operator to identify and correct the common malfunctions that might occur during operation and/or maintenance of the Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA). Intermediate and depot-level troubleshooting is not included in this manual, as these procedures are beyond the scope of the shipboard maintenance and repair functions.

This manual does not address all malfunctions that could occur. If a Shipboard ACADA malfunction is not listed and/or cannot be corrected, notify the Damage Control Assistant (DCA).

5-2 OPERATOR TROUBLESHOOTING.

Table 5-1 is an operator-troubleshooting chart for Shipboard ACADA. Use the chart to identify a condition and its cause, then take the corresponding corrective action.

NOTE

If the errors listed above occur infrequently, there may be no need for corrective actions. The errors must be occurring on a continuous or consistent basis for the corrective actions in Table 5-1 to apply.

If the corrective actions shown in Table 5-1 do not correct the problem, submit a work request to your Intermediate Maintenance Activity (IMA) as shown in Table 5-1.

Table 5-1. Shipboard ACADA Troubleshooting Chart

| Diagnostic Message | Description | Corrective Action |
|---------------------------|--|----------------------------------|
| temp hi | Temperature of the IMS cells inside the DU is too high for proper operation. | * |
| temp lo | Temperature of the IMS cells inside the DU is too low for proper operation. | * |
| no samp | Zero pressure reading from sample pump. | Check intake and exhaust caps. * |
| samp hi | Pressure of the DU sample pump is within proper operating range. | No Maintenance Action needed * |
| samp lo | Pressure of the DU sample pump is below proper operating range. | Check intake and exhaust caps. * |
| no rec | Failure of the DU recirculating pump or a blockage in the recirculating air circuit. | Check intake and exhaust caps. * |
| rec hi | Pressure of the DU recirculating pump is within proper operating range. | No Maintenance Action needed * |

Table 5-1. Shipboard ACADA Troubleshooting Chart (Continued)

| Diagnostic Message | Description | Corrective Action |
|--------------------|---|----------------------------------|
| rec low | Pressure of the DU recirculating pump is below proper operating range. | Check intake and exhaust caps. * |
| both flt | Neither DU IMS cell is producing proper IMS baseline signature. DU will not detect chemical agents or simulants. | Return to depot |
| pcel flt | DU positive - IMS cell is not producing a proper IMS baseline signature. DU will not detect nerve agents or simulant. | Return to depot |
| ncel flt | DU negative - IMS cell is not producing a proper IMS baseline signature. DU will not detect nerve agents or simulant. | Return to depot |
| both gates | Neither DU IMS cell is producing a proper IMS baseline signature. DU will not detect nerve agents or simulant. | Return to depot |
| pcel gate | Positive DU IMS cell is not producing proper IMS baseline signature. DU will not detect chemical agents or simulants. | Return to depot |
| ncel gate | Negative DU IMS cell is not producing proper IMS baseline signature. DU will not detect chemical agents or simulants. | Return to depot |
| pcel low | Positive IMS cell baseline signature peak amplitude is lower than proper range | Return to depot |
| ncel low | Negative IMS cell baseline signature peak amplitude is lower than proper range | Return to depot |
| p shift | Positive IMS cell baseline signature peak location is shifted out of proper range | Return to depot |
| n shift | Negative IMS cell baseline signature peak location is shifted out of proper range | Return to depot |
| desiccant | Desiccant cartridge is saturated. | Change desiccant cartridges |

* These messages are warnings, not errors. If confidence check is successful, they should be ignored. If confidence test is unsuccessful, replace desiccant cartridge. If confidence test is still unsuccessful, return Shipboard ACADA to depot.

5-3 CORRECTIVE ACTIONS.

5-3.1 Desiccant Filter Removal and Replacement.

- a. If system is running, push the power button located on the Power Supply Assembly. If system is powered off, proceed to step b.
- b. Remove battery case from DU by releasing the two latches on either side of the Power Supply Assembly.
- c. Place DU on its rear surface, so the front of the unit is facing up.
- d. Open the Shipboard ACADA DU by releasing latches on the top, sides, and bottom of the DU.
- e. Unsnap the desiccant cartridge-retaining latch, which is located on the left side of the desiccant cartridge. (See figure 5-1).
- f. Remove entire desiccant cartridge by carefully pulling it straight out from the housing inside the DU. Do not dispose of old cartridge, as it will be returned for recycling.

NOTE

To prevent contamination of new desiccant cartridge, do not open package until you are ready to install it in DU.

WARNING

After opening new desiccant cartridge package, never touch the new desiccant cartridge around the screw threads or cartridge seating area. This will result in system contamination. Personnel must always have clean, grease-free and oil-free hands while performing this maintenance action.

- e. Open package containing new desiccant cartridge. Remove screws from the bottom of the cartridge. (These screws seal the cartridge to prevent contamination and moisture from entering.)
- f. Press the small guide key on the bottom of the desiccant cartridge into the corresponding hole in the desiccant cartridge housing. Snap the retaining latch back in place.
- g. Close the detector unit and close the latches that hold the two sides of the detector together. There are four latches, one each on the top, sides and bottom of the detector unit.
- h. Return old desiccant cartridge to depot for recycling. Package old desiccant in accordance with standard ship practices and return to the In-Service Engineering Activity (ISEA) at:

Naval Surface Warfare Center,
Crane Division
Code 805D, BLDG 3324
Crane IN 47522-5001
Phone (812) 854-5725 DSN 482-5725 or
(812) 854-4050 DSN 482-4050



5-3.2 Installation and Removal of Purge Filter Assembly

Figure 5-1, Shipboard ACADA DU Interior view

5-3.2.1 Installation

NOTE

The Purge Filter should be replaced prior to attaching assembly to the Detector Unit. See chapter 6 for Part numbers to obtain replacement purge filters.

- a. The purge filter assembly should be installed on the Shipboard ACADA Detector upon initial startup or when surrounding environmental conditions are suspected to contain contaminating vapors (i.e. paint fumes, floor waxing, etc.). If possible, move DU to a clean operating environment.
- b. Remove raincap (if installed) by grasping and turning counter-clockwise.
- c. Remove Intake Particulate Filter assembly by loosening the nut that fastens the assembly to the DU intake port. (See figure below).
- d. Attach Purge Filter Assembly to the DU, position the filter assembly so as not to interfere with the movement of the DU handle and tighten the nut to the DU intake port. Do not overtighten.

5-3.2.2 Removal

- a. To remove the Purge Filter Assembly loosen the nut attaching the assembly to the DU intake port. Remove Purge Filter Assembly.

- b. Re-install Particulate Intake Filter, and tighten nut on the DU intake port. (See figure below). Do not overtighten.
- c. Re-install raincap (if used) by rotating it clockwise on tip of the Particulate Intake Filter.

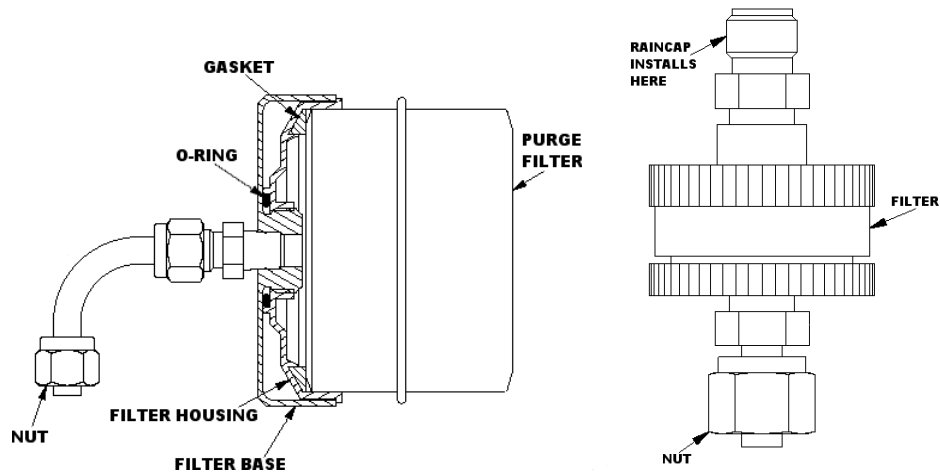


Figure 5-2, Purge Filter and Intake Particulate Filter Assemblies

5-3.3 Installation and removal of Wand Assembly.

5-3.3.1 Installation

- a. Remove Rain cap from Intake Particulate Filter, (if installed) by grasping rain cap and rotating counter clockwise.
- b. Attach Wand Assembly by tightening nut on end of Tefzel tubing to the top of the Intake Particulate Filter assembly.
(See figure 5-3). Do not overtighten.

5-3.3.2 Removal

- a. Reverse steps outlined in para 5-3.3.1.

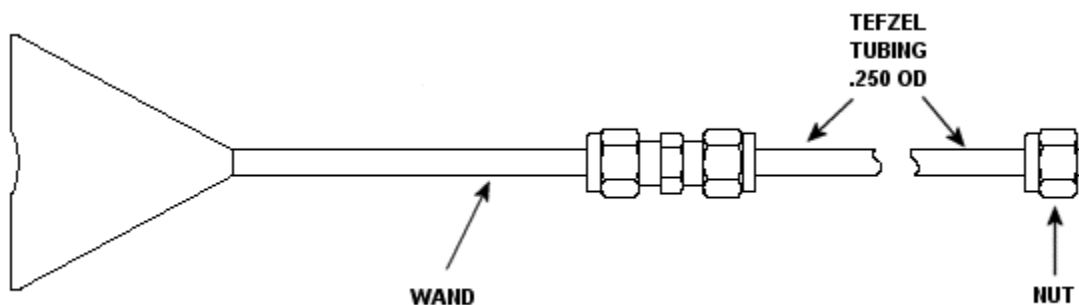


Figure 5-3, Wand Assembly

CHAPTER 6

PARTS LIST

6-1 INTRODUCTION.

This chapter identifies the spare parts that are used on the Shipboard ACADA.

6-2 LIST OF MANUFACTURERS.

Table 6-1 provides the names, addresses, and codes of manufacturers supplying spare parts for Shipboard ACADA as referenced in column 3 of the parts list.

Table 6-1. List of Manufacturers

| Code | Name and Address |
|-------|---|
| 53711 | Department of the Navy Naval Sea Systems Command Arlington, VA 22242 |
| 8F723 | Mine Safety Appliance Co. 36 Great Valley Parkway Malvern, PA 19335 |
| 66343 | Solberg Manufacturing 1151 West Ardmore Ave. Itasca, IL 60143 |
| 4N861 | RESCO/Washingto n 10523 Ewing Road Beltsville, MD 20705 |

6-3 SPARE PARTS LIST.

Table 6-2 includes the following information for each part:

- Column 1, Description: This column contains the name of the part and descriptive data to identify the part.
- Column 2, Quantity: This column indicates the quantity of spare parts required per system.
- Manufacturer Code: This column contains the original part manufacturer's federal supply code identification number.
- Part number: This column lists the part or drawing number assigned by the original manufacturer of the part. Where applicable, National Stock Numbers (NSNs) are provided for items available from multiple sources.

Table 6-2. Spare Parts List

| Nomenclature | Quantity | Cage Code | Part Number | Part Number / NSN |
|--|----------|-----------|------------------------------|-------------------|
| Shipboard Automatic Chemical Agent Detector, Alarm (Shipboard ACADA) | 1 | 53711 | 7344570 | 6665-01-484-7823 |
| Technical Manual | 1 | | SW073-AF-MMO-010/MK 27 MOD 0 | 0640-LP-022-5610 |
| Desiccant Filter Assembly | 1 | 53711 | 7243490 | 6665-LL-H56-2425 |
| AC Power Cable | 1 | 53711 | 7343949 | 6665-LL-H56-2435 |
| DU Power Cable | 1 | 53711 | 7343948 | 6665-LL-H56-2436 |
| Power Supply Assembly | 1 | 53711 | 7343940 | 6665-LL-H56-2431 |
| Purge Filter Assembly | 1 | 53711 | 7344584 | 6665-LL-H56-2428 |
| Purge Filters(Respirator cartridge) | 6 | 53711 | 815180 | 4240-01-206-1077 |
| Particulate Filter Assembly | 1 | 53711 | 7343945 | 6665-LL-H56-2429 |
| Particulate Filters Media, 25 mm | 10 | 59728 | 4752D20 | 6640-01-323-5141 |
| Rain Hood Assembly | 1 | 53711 | 7243490 | 6665-LL-H56-2426 |
| Wand Assembly | 1 | 53711 | 7344583 | 6665-LL-H56-2427 |
| Tefzel Tubing | 5 Ft | | .250 X .031 NAT EFTE | |
| Carrying Strap | 1 | 53711 | 10899 | 6665-LL-H56-2432 |
| Storage Case | 1 | U3092 | D614-2281 (USN) | 6665-LL-H56-2444 |
| Simulant Tube | 1 | | 442-642 | 6665-01-382-7081 |
| Handle, DU | 1 | 53711 | 7343950 | |
| Screws, DU Handle | 2 | 39428 | 9035A202 | |
| Lanyard Assembly, Intake | 1 | 53711 | 7343946 | 6665-LL-H56-2433 |
| O ring, Viton, Intake Particulate Filter | 1 | 05668 | 29827-52 | |
| Cover, Exhaust | 1 | 53711 | 7343943 | 6665-LL-H56-2434 |
| Cable, AC power | 1 | 53711 | 7343949 | 6665-LL-H56-2435 |
| Cable, DU power | 1 | 53711 | 7343948 | 6665-LL-H56-2436 |

CHAPTER 7

SHIPBOARD ACADA PACKING & UNPACKING PROCEDURES

7-1 INTRODUCTION. This chapter contains the necessary information to unpack and pack the Shipboard ACADA unit.

7-2 UNPACKING INSTRUCTIONS

1. Open the box or crate labeled with the detector unit in it
2. Remove Packing
3. Remove Transit Case which is in a green bag with the detector unit and all other accessories which are contained inside.

7-2.1 Detector Unit (DU). The two ion mobility spectroscopy (IMS) cells in each detector unit (DU) contain americium-241, a source of alpha radiation (total per DU is 220 μ Ci). The IMS cells are potentially dangerous when opened or broken. The IMS cells should be removed from the DU and serviced only at the depot. If exposed to this radiation hazard, see your ship's medical officer and report the incident to your ship's safety officer.

7.3 Packing

CAUTION

Insure that the protective caps are installed in both the inlet and exhaust ports.

NOTE

Since the (SHIPBOARD ACADA) Detector Unit, contains Radioactive Material, the Radiological Protection (Safety) Officer (RPO/RSO) must be notified before shipment to ensure that all special requirements have been met i.e. radiation wipe test, marking, etc.

1. Wrap the detector in cushioning material to protect it from sock and vibration.
2. Place the wrapped Detector in a Transit case with the accessories required.(see figure 8-1)
3. Place the Transit case with the detector into a stronger outer shipping container
4. Make sure the shipping container has a sticker on it that says "RADIOACTIVE." Marking shall be at least 16-point type or 3/8 inch in height.

5. Apply cushioning or fiberboard dunnage as required to protect in inner Transit case container and its contents.
6. Close the container in a manner that will allow shipment without loss of the contents.

CHAPTER 8

REMOVAL AND RETURN PROCEDURE

8-1 INTRODUCTION.

This chapter contains the necessary information to remove and return the Shipboard Automatic Chemical Agent Detector and Alarm (Shipboard ACADA) and any of its components. Included in this chapter are packing, marking, and shipping and special instructions.

8-2 PACKING INSTRUCTIONS.

Packing is the reverse of unpacking. See Chapter 7 for instructions.

8-3 MARKING INSTRUCTIONS.

Mark each box in accordance with MIL-STD-129. For each Detector Unit (DU), the following statement shall be included on the outside of the packaging as well as on the shipping document:

THIS PACKAGE CONFORMS TO THE CONDITIONS AND LIMITATIONS SPECIFIED IN 49 CFR 173.422 FOR EXCEPTED RADIOACTIVE MATERIAL, INSTRUMENTS AND ARTICLES, UN2910. IT IS EXCEPTED FROM MARKING AND LABELING REQUIREMENTS.

Table 8-1. Shipboard ACADA Removal Summary Checklist

| Unit or Item | Quantity | Part Number | Serial Number | Check |
|------------------------|----------|----------------------|---------------|-------|
| Detector Unit Assembly | 2 | 7243432 | | |
| Power Supply Assembly | 4 | 7343940 | | |
| AC Power Cable | 1 | 7343949 | | |
| DU power cable | 1 | 7343948 | | |
| Confidence Sampler | 1 | NSN 6665-01-382-7081 | | |
| Manual | 2 | SW073-AF-MMO-010 | | |

8-4 SHIPPING INSTRUCTIONS.

The Shipboard ACADA and any of its components must be shipped to:

COMMANDER
CODE 805D BLDG 3324
NAVSURFWARCENDIV
300 HIGHWAY 361
CRANE IN 47522-5001

The shipment must be by traceable means. Provide advance notice of shipment by email, message, phone or FAX to:

NAVSURFWARCENDIV CRANE
CODE 805D
Wagler_tory@crane.navy.mil, or clark_s@crane.navy.mil
PHONE: DSN 482-1052/4050
Commercial (812) 854-1052/4050
FAX: DSN 482-5828 or
Commercial (812) 854-5828

Include the document number, serial number of each component, if applicable, date shipped, shipping activity, and phone or FAX number.

APPENDIX A

ABBREVIATIONS AND ACRONYMS

| | | | | |
|-------------------|---|---|--------|---------|
| AC | – | Alternating Current | | |
| ACADA | – | (Shipboard) Automatic Chemical Agent Detector and Alarm | | |
| A/D | – | Analog-to-Digital | | |
| Am ²⁴¹ | – | americium-241 | | |
| BIT | – | Built-In-Test | | |
| BPL | – | Bituminous Product, Low Ash | | |
| CBR | – | Chemical, Biological, and Radiological | | |
| CDU | – | Control Display Unit | | |
| CPU | – | Central Processing Unit | | |
| DC | – | Direct Current | | |
| DCA | – | Damage Control Assistant | | |
| DPM | – | Dipropylene Glycol Monomethyl Ether | | |
| DU | – | Detector Unit | | |
| IMA | – | Intermediate Maintenance Activity | | |
| IMS | – | Ion Mobility Spectroscopy | | |
| ISEA | – | In-Service Engineering Activity | | |
| lpm | – | Liters per minute | | |
| MRC | – | Maintenance Requirement Card | | |
| ms | – | millisecond | | |
| Ci | – | microcurie | | |
| NPFC | – | Naval Publications and Forms Center | | |
| NSN | – | National Stock Number | | |
| NSWSES | – | Naval Ship Weapon Systems Engineering Station | | |
| PC | – | Printed Circuit | | |
| PMS | – | Planned Maintenance System | | |
| RDU | – | Remote Display Unit | | |
| sec | – | seconds | | |
| WCS | – | Work Center Supervisor | | |
| VAC | – | Volts Alternating Current | | |
| VDC | – | Volts | Direct | Current |

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| A. CONTRACT LINE ITEM NO. | | B. EXHIBIT A | | C. CATEGORY: TDP TM OTHER X | | | | | | |
| D. SYSTEM/ITEM | | | E. CONTRACT/PR NO. | | F. CONTRACTOR | | | | | |
| 1. DATA ITEM NO. A006 | | 2. TITLE OF DATA ITEM CONFIGURATION AUDIT REPORT | | | 3. SUBTITLE PCA | | | | | |
| 4. AUTHORITY (Data Acquisition Document No.) DI-CMAN-81022C | | | 5. CONTRACT REFERENCE 3.2.6 | | 6. REQUIRING OFFICE NSWC, CRANE, CODE 805D | | | | | |
| 7. DD 250 REQ LT | | 9.DIST STATEMENT REQUIRED SEE BLK 16 | | 10. FREQUENCY OTIME | | 12. DATE OF FIRST SUBMISSION SEE BLK 16 | | | | |
| 8. APP CODE | | 11. AS OF DATE | | 13. DATE OF SUBSEQUENT SUBMISSION SEE BLK 16 | | 14. DISTRIBUTION | | | | |
| | | | | a. ADDRESSEE | | b. COPIES | | | | |
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| | | | | | | Reg Repro | | | | |
| 16. REMARKS: BLOCK 7 – Submit one info copy only of LT to: COMMANDER, CODE 1165 B-3291 ATT M SIDDON, NAVAL SURFACE WARFARE CENTER (NSWC) 300 HIGHWAY 361, CRANE IN 47522-5001 or electronically to: siddons_marlene@crane.navy.mil Block 9 - Distribution Statement C and DESTRUCTION NOTICE APPLIES.: BLOCKS 12 AND 13 – Submit the report within 21 days after completion of the PCA. Block 14 – Addressee List (AL) AL-01 is DCMAO AL-02 COMMANDER CODE 805 BLDG 3324 ATT S CLARK NAVAL SURFACE WARFARE CENTER, CRANE 300 HIGHWAY 361 CRANE IN, 47522-5001 Or electronically to: clark_sandra@crane.navy.mil | | | | | | AL-01 - DCMAO | | | | 1 |
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| G. PREPARED BY | | | R. DATE | | S. APPROVED BY Theresa Andis, Crane Data Manager | | J. DATE | | | |

17. PRICE GROUP

18. ESTIMATED
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| CONTRACT DATA REQUIREMENTS LIST (1 Data Item) | | | | | | Form Approved OMB No. 0704-0188 | | | | | |
| <small>Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA. 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for Contract/PR No. listed in Block E.</small> | | | | | | | | | | | |
| A. CONTRACT LINE ITEM NO. | | | B. EXHIBIT A | | C. CATEGORY: TDP TM OTHER X | | | | | | |
| D. SYSTEM/ITEM | | | E. CONTRACT/PR NO. | | F. CONTRACTOR | | | | | | |
| 1. DATA ITEM NO. A007 | | 2. TITLE OF DATA ITEM PROVISIONING TECHNICAL DOCUMENTATION | | | 3. SUBTITLE | | | | | | |
| 4. AUTHORITY (Data Acquisition Document No.) DI-ILSS-81285 | | | 5. CONTRACT REFERENCE 3.2.8 | | 6. REQUIRING OFFICE NSWC, CRANE, CODE 805D | | | | | | |
| 7. DD 250 REQ LT | | 9.DIST STATEMENT REQUIRED | | 10. FREQUENCY OTIME | | 12. DATE OF FIRST SUBMISSION 60 DAC | | | | | |
| 8. APP CODE A | | SEE BLK 16 | | 11. AS OF DATE | | 13. DATE OF SUBSEQUENT SUBMISSION SEE BLK 16 | | | | | |
| 16. REMARKS: BLOCK 7 – Submit one info copy only of LT to: COMMANDER, CODE 1165 B-3291 ATT M SIDDON, NAVAL SURFACE WARFARE CENTER (NSWC) 300 HIGHWAY 361, CRANE IN 47522-5001 or electronically to: siddons_marlene@crane.navy.mil Block 9 - Distribution Statement C and DESTRUCTION NOTICE APPLIES.: Block 8 - The Government will review the draft manual for technical content and adequacy in accordance with the contract Sow / Specifications. Written comments to be incorporated into the final will be provided within 30 days after receipt of the draft. BLOCKS 12 AND 13 – Submit the draft 60 days after award. Submit the final 30 days after receipt of Government comments. Block 14 – Addressee List (AL) AL-01 is DCMC AL-02 COMMANDER CODE 805 BLDG 3324 ATT S CLARK NAVAL SURFACE WARFARE CENTER, CRANE 300 HIGHWAY 361 CRANE IN, 47522-5001 Or electronically to: clark_sandra@crane.navy.mil Electronic submissions shall be compatible with Windows 98 and in MS Office applicatios or other format agreed upon at award. | | | | | | 14. DISTRIBUTION | | b. COPIES | | | |
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17. PRICE GROUP

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| CONTRACT DATA REQUIREMENTS LIST (1 Data Item) | | | | | | Form Approved OMB No. 0704-0188 | | | | | |
| <small>Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA. 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for Contract/PR No. listed in Block E.</small> | | | | | | | | | | | |
| A. CONTRACT LINE ITEM NO. | | | B. EXHIBIT A | | C. CATEGORY: TDP TM OTHER X | | | | | | |
| D. SYSTEM/ITEM | | | E. CONTRACT/PR NO. | | F. CONTRACTOR | | | | | | |
| 1. DATA ITEM NO. A008 | | 2. TITLE OF DATA ITEM RECOMMENDED SPARE PARTS LIST | | | 3. SUBTITLE | | | | | | |
| 4. AUTHORITY (Data Acquisition Document No.) DI-ILSS-80134A | | | 5. CONTRACT REFERENCE 3.2.8 | | 6. REQUIRING OFFICE NSWC, CRANE, CODE 805D | | | | | | |
| 7. DD 250 REQ LT | | 9.DIST STATEMENT REQUIRED | | 10. FREQUENCY ASREQ | | 12. DATE OF FIRST SUBMISSION SEE BLK 16 | | | | | |
| 8. APP CODE | | SEE BLK 16 | | 11. AS OF DATE | | 13. DATE OF SUBSEQUENT SUBMISSION 15 DARC | | | | | |
| 16. REMARKS: BLOCK 7 – Submit one info copy only of LT to: COMMANDER, CODE 1165 B-3291 ATT M SIDDONS, NAVAL SURFACE WARFARE CENTER (NSWC) 300 HIGHWAY 361, CRANE IN 47522-5001 or electronically to: siddons_marlene@crane.navy.mil BLOCK 8 - Government will review the draft list IAW technical adequacy and content. Written comments to be incorporated into the final will be provided by the Government 15 days after receipt of the draft. Block 9 - DISTRIBUTION STATEMENT C and DESTRUCTION NOTICE APPLIES.: BLOCKS 10 and 12. – Submit the list No Later Than (NLT) 30 days after ECP requiring a part change is approved. AL-01 is DCMC AL-02 COMMANDER CODE 805 BLDG 3324 ATT S CLARK NAVAL SURFACE WARFARE CENTER, CRANE 300 HIGHWAY 361 CRANE IN, 47522-5001 Or electronically to: clark_sandra@crane.navy.mil Electronic submissions shall be compatible with Windows 98 and in MS Office applications or other format agreed upon at award. | | | | | | 14. DISTRIBUTION | | b. COPIES | | | |
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17. PRICE GROUP

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| CONTRACT DATA REQUIREMENTS LIST (1 Data Item) | | | | | | Form Approved OMB No. 0704-0188 | | |
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| Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA, 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for Contract/PR No. listed in Block E. | | | | | | | | |
| A. CONTRACT LINE ITEM NO. | | | B. EXHIBIT A | | C. CATEGORY: TDP TM OTHER X | | | |
| D. SYSTEM/ITEM | | | E. CONTRACT/PR NO. | | F. CONTRACTOR | | | |
| 1. DATA ITEM NO. A012 | | 2. TITLE OF DATA ITEM NOTICE OF REVISION (NOR) | | | 3. SUBTITLE | | | |
| 4. AUTHORITY (Data Acquisition Document No.) DI-CMAN-80642B | | | 5. CONTRACT REFERENCE 3.2.9.2 | | 6. REQUIRING OFFICE NSWC, CRANE, CODE 805D | | | |
| 7. DD 250 REQ LT | | 9. DIST STATEMENT REQUIRED SEE BLK 16 | | 10. FREQUENCY ASREQ | | 12. DATE OF FIRST SUBMISSION ASREQ | | |
| 8. APP CODE A | | 11. AS OF DATE | | 13. DATE OF SUBSEQUENT SUBMISSION ASREQ | | 14. DISTRIBUTION | | |
| | | | | | | a. ADDRESSEE b. COPIES <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;">Draft</div> <div style="width: 35%;">Final</div> </div> <div style="display: flex; justify-content: space-between;"> <div></div> <div style="display: flex;"> <div style="width: 45%;">Reg</div> <div style="width: 45%;">Repro</div> </div> </div> | | |
| 16. REMARKS: BLOCK 4 - BLK 10 OF DATA ITEM DESCRIPTION. The RFW may be in contractor format. Content may use Appendix G of MIL-STD-973 as guidance. BLOCK 7 – Submit one info copy only of LT to: COMMANDER, CODE 1165 B-3291 ATT M SIDDONS, NAVAL SURFACE WARFARE CENTER (NSWC) 300 HIGHWAY 361, CRANE IN 47522-5001 or electronically to: siddons_marlene@crane.navy.mil BLOCK 8 - The Government will review the NOR for technical, content, impact on cost and schedules. Comments will be provided within 30 days after receipt of the NOR. Block 9 - Distribution Statement C and DESTRUCTION NOTICE APPLIES.: BLOCKS 10, 12 AND 13 – Submit the NOR concurrently with ECP as supporting documentation. Block 14 – Addressee List (AL) AL-01 is DCMC AL-02 COMMANDER CODE 805 BLDG 3324 ATT S CLARK NAVAL SURFACE WARFARE CENTER, CRANE 300 HIGHWAY 361 CRANE IN, 47522-5001 Or electronically to: clark_s@crane.navy.mil Electronic submissions shall be compatible with Windows 98 and in MS Office applications or other format agreed upon at award. | | | | | | <div style="border: 1px solid black; padding: 2px;"> 17. PRICE GROUP </div> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> 18. ESTIMATED TOTAL PRICE INSERT IN SECT. B </div> | | |
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| CONTRACT DATA REQUIREMENTS LIST (1 Data Item) | | | | | Form Approved OMB No. 0704-0188 | |
| <small>Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA. 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for Contract/PR No. listed in Block E.</small> | | | | | | |
| A. CONTRACT LINE ITEM NO. | | B. EXHIBIT A | C. CATEGORY: TDP TM OTHER X | | | |
| D. SYSTEM/ITEM | | E. CONTRACT/PR NO. | | F. CONTRACTOR | | |
| 1. DATA ITEM NO. A015 | 2. TITLE OF DATA ITEM CONFERENCE AGENDA | | 3. SUBTITLE | | | |
| 4. AUTHORITY (Data Acquisition Document No.) DI-ADMN-81249A | | 5. CONTRACT REFERENCE 3.2.9 | | 6. REQUIRING OFFICE NSWC, CRANE, CODE 805D | | |
| 7. DD 250 REQ LT | 9.DIST STATEMENT REQUIRED SEE BLK 16 | 10. FREQUENCY ASREQ | 12. DATE OF FIRST SUBMISSION ASREQ | 14. DISTRIBUTION | | |
| 8. APP CODE | | 11. AS OF DATE | 13. DATE OF SUBSEQUENT SUBMISSION ASREQ | a. ADDRESSEE | b. COPIES | |
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| 16. REMARKS: BLOCK 7 – Submit one info copy only of LT to: COMMANDER, CODE 1165 B-3291 ATT M SIDDON, NAVAL SURFACE WARFARE CENTER (NSWC) 300 HIGHWAY 361, CRANE IN 47522-5001 or electronically to: siddons_marlene@crane.navy.mil Block 9 – Distribution Statement C and DESTRUCTION NOTICE APPLIES.: BLOCKS 10, 12 AND 13 – Submit agenda via email no later than 2 days prior to sheduled meetings. Block 14 – Addressee List (AL) AL-01 is DCMC AL-02 COMMANDER CODE 805 BLDG 3324 ATT S CLARK NAVAL SURFACE WARFARE CENTER, CRANE 300 HIGHWAY 361 CRANE IN, 47522-5001 Or electronically to: clark_s @crane.navy.mil Electronic submissions shall be compatible with Windows 98 and in MS Office applications or other format agreed upon at award. | | | | AL-01 – DCMC | | 1 |
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17. PRICE GROUP

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